



DEVELOPMENT REVIEW BOARD PANEL A AGENDA

January 09, 2023 at 6:30 PM

Wilsonville City Hall & Remote Video Conferencing

PARTICIPANTS MAY ATTEND THE MEETING AT:

City Hall, 29799 SW Town Center Loop East, Wilsonville, Oregon

Zoom: <https://us02web.zoom.us/j/85843043229>

TO PROVIDE PUBLIC TESTIMONY:

Individuals must submit a testimony card online:
<https://www.ci.wilsonville.or.us/DRB-SpeakerCard>
and email testimony regarding Resolution No. 410
to Georgia McAlister, Associate Planner at
gmcaster@ci.wilsonville.or.us
by 2:00 PM on January 9, 2023.

CALL TO ORDER

CHAIR'S REMARKS

ROLL CALL

Jean Svadlenka
Rachelle Barrett
John Andrews

CITIZEN INPUT

CONSENT AGENDA

1. [Approval of minutes of the November 14, 2022 DRB Panel A meeting](#)

PUBLIC HEARINGS

2. [Resolution No. 410. ESS Parking Lot Expansion Project.](#) The applicant is requesting approval of a Stage 2 Final Plan Modification and Site Design Review for a parking lot expansion for the ESS building located at 26440 SW Parkway Avenue.

Case Files:

- [DB22-0008 ESS Parking Lot Expansion Project](#)
- [Stage 2 Final Plan Modification \(STG222-0008\)](#)
- [Site Design Review \(SDR22-0008\)](#)

BOARD MEMBER COMMUNICATIONS

3. [Recent City Council Action Minutes](#)

STAFF COMMUNICATIONS

4. New DRB Member Training

ADJOURN

The City will endeavor to provide the following services, without cost, if requested at least 48 hours prior to the meeting by contacting Shelley White, Administrative Assistant at 503-682-4960: assistive listening devices (ALD), sign language interpreter, and/or bilingual interpreter. Those who need accessibility assistance can contact the City by phone through the Federal Information Relay Service at 1-800-877-8339 for TTY/Voice communication.

Habr  interpretes disponibles para aqu llas personas que no hablan Ingl s, previo acuerdo. Comun quese al 503-682-4960.

DEVELOPMENT REVIEW BOARD MEETING
JANUARY 9, 2023
6:30 PM

Item 1.

Consent Agenda:

1. Approval of minutes of November 14, 2022 DRB
Panel A meeting



**DEVELOPMENT REVIEW BOARD PANEL A
MEETING MINUTES**

November 14, 2022 at 6:30 PM

Wilsonville City Hall & Remote Video Conferencing

CALL TO ORDER

A regular meeting of the Development Review Board Panel A was held at City Hall beginning at 6:30 p.m. on Monday, September 12, 2022. Chair Jean Svadlenka called the meeting to order at 6:30 p.m.

CHAIR'S REMARKS

The Conduct of Hearing and Statement of Public Notice were read into the record.

ROLL CALL

Present for roll call were: Jean Svadlenka, Daniel McKay, Kathryn Neil, and Rachelle Barrett. Ben Yacob was absent.

Staff present: Kimberly Rybold, Amanda Guile-Hinman, Miranda Bateschell, Cindy Luxhoj, Amy Pepper, and Shelley White

CITIZENS INPUT – This is an opportunity for visitors to address the Development Review Board on items not on the agenda. There were no comments.

CONSENT AGENDA

1. Approval of minutes of October 10, 2022 DRB Panel A meeting

Kathryn Neil moved to approve the October 10, 2022 DRB Panel A meeting minutes as presented. Rachelle Barrett seconded the motion, which passed 4 to 0.

PUBLIC HEARINGS

2. **Resolution No. 409. Mercedes Benz Inventory Storage Area.** The Applicant is requesting approval of a Stage 2 Final Plan Modification and Site Design Review for site improvements to use an existing gravel building pad area for inventory storage on the south lot of the Mercedes Benz dealership.

Case Files:

DB22-0005 Mercedes Benz Inventory Storage Area

- Stage 2 Final Plan Modification (STG222-0005)
- Site Design Review (SDR22-0005)

Chair Svadlenka called the public hearing to order at 6:36 p.m. and read the conduct of hearing format into the record. All Board members declared for the record that they had visited the site. No board member, however, declared a conflict of interest, bias, or conclusion from a site visit. No board member participation was challenged by any member of the audience.

Cindy Luxhoj, Associate Planner, announced that the criteria applicable to the application were stated starting on page 2 of the Staff report, which was entered into the record. Copies of the report were made available to the side of the room and on the City's website.

Ms. Luxhoj presented the Staff report via PowerPoint, briefly reviewing the site's location and surrounding features, with these key additional comments:

- The original plans for development of the subject site were approved in 1997 for two buildings, one on the north lot to house Mercedes Benz, and one on the south lot to house another dealership. At the time, the building on the north lot was constructed and site improvements, such as landscaping, lighting, and stormwater were installed for the entire site consistent with the approval. However, the gravel building pad on the south lot was left unimproved, and the second building was never constructed. (Slide 3)
 - Currently, the entire site was occupied by one Mercedes Benz dealership which used the unimproved gravel building pad to park inventory and service vehicles. The use of the site in that manner was a violation of City Code and City-approved development plans.
- For the past several years, numerous Code violations, including illegal use of the unimproved building pad for inventory storage, and exceeding the storage and parking capacity on-site, had existed on the property. Those violations had resulted in negative impacts to neighboring businesses and service providers which had led to numerous complaints to the City.
 - To address those violations, the owner prepared a development proposal which was submitted to the City on June 9, 2021. That application expired on December 6, 2021 without achieving completeness and compliance issues continued unresolved. On December 7, 2021, the City's Planning Director sent a letter to Swickard Auto Group regarding the ongoing Code violations and requested cessation of all violations by January 3, 2022. The letter notified the owner that citations and fines would incur if they failed to address the violations, which Ms. Luxhoj reviewed as follows (Slide 5):
 - Unlawful unloading/loading in the public street
 - Lack of required employee parking spaces on site
 - Illegal outside storage of vehicles
 - Illegal use of the building pad for parking vehicles
 - Parking vehicles in unpaved areas
 - Unapproved used car sales on site
 - Inadequate screening and covering of vehicle storage; and
 - Illegal overnight vehicle parking on the plaza facing Interstate-5

- On February 28, 2022, Swickard Auto Group submitted the subject application for a Stage 2 Final Plan Modification and Site Design Review, the owner's second attempt to submit a development proposal to address the violations and bring the site into compliance with the Code and previous development approvals.
 - The Stage 2 Final Plan Modification modified the location of designated parking for employees, customers, service vehicles, and inventory, and the function and design of the south lot to replace the building previously approved in 1997 with a paved inventory storage area with landscaping and screening for the Mercedes Benz dealership.
 - Site Design Review was focused on the design of the inventory storage area, including paving, landscaping, and screening to bring the property into compliance with applicable City standards for a car dealership within the PDC Zone. The City deemed the current application complete on August 26, 2022.
- Proper noticing was followed for the application. The subject property was shaded in blue, and the notice area was outlined and shaded in green. (Slide 7) The public hearing notice was mailed to property owners within 250 ft of the subject property, posting at City Hall, the library, and community center, on-site posting, and publication in the Wilsonville Spokesman. No public comments for the project were received during the comment period.
- A discussion of key clear and objective development standards that applied to the proposed applications was included in the Findings contained in the DRB Staff report. The role of the DRB was to verify compliance of the proposed applications with previous development approvals and the clear and objective standards of the current Code. No requests in the current application required discretionary review.
- Section 4.004 of the Code specified that the Planning Director, “shall not issue a development permit for the improvement or use of land that has been previously divided or otherwise developed in violation of the Code, regardless of whether the permit applicant or its predecessor created the violation, unless the violation can be rectified as part of the development.”
 - Therefore, the only path to approval of the current application was a definitive determination that the proposal resolved the compliance issues for the site. Because of this requirement, review of the current application focused not only on the Code requirements for the Stage 2 Final Plan Modification and Site Design Review, but also on clarifying how outstanding compliance issues would be resolved through the proposed site modifications; specifically, by providing a detailed update on parking and vehicle display management on the site currently and how that would change with the current application, including an assessment of how management did or did not meet the conditions of approval of 97DB23; explaining how nonstorage parking areas would be preserved for, and clearly delineated, to serve customer and employee parking needs for the uses approved in the Site Plan as identified by the parking minimums in 97DB23; and explaining how the proposed inventory storage area would be used, and how the conditions of approval in 97DB23 specifying that the storage area is for “outdoor storage of new vehicles” would be met.
- For the purposes of evaluating parking standards, the parking minimum was 1.67 spaces per 1,000 sq ft, and the maximum was 6.2 spaces per 1,000 sq ft. As the existing building was

81,621 sq ft, the minimum number of parking spaces was 137, and the maximum number of spaces was 506.

- The Applicant proposed to provide 160 parking spaces, including six ADA accessible spaces, which exceeded the minimum of 137 spaces by 23 spaces and was well below the maximum allowed. Further, the Applicant was required to provide a minimum of 40 designated employee parking spaces on site per conditions of the prior land use approval.
- As shown in the plan and table (Slide 10), 44 spaces would be designated for employees, 24 spaces for customers, and 92 spaces for service leasing. An additional 58 spaces on the upper level of the garage portion of the dealership building on the north lot were provided for parking of inventory vehicles and other overflow parking.
- Condition of Approval PDA 7 required that the 44 proposed employee parking spaces be provided, clearly demarcated, and left free and clear of other vehicles to ensure that employees could park in the reserved spaces on site.
- The original 1997 approval modified the Stage 1 Preliminary Plan for the site to allow 20% for outdoor storage of vehicles for sale or lease with appropriate screening. The outdoor storage was not required to be covered or completely enclosed within a building as it is under current Code now in effect, so long as it was screened and buffered from view at the property lines.
 - The subject application was not modifying the Stage 1 Preliminary Plan, so 20% of the 246,727 sq ft site, or up to 49,345 sq ft, could be used for outdoor vehicle storage so long as it was appropriately screened. The current application proposed to include the area of the existing gravel building pad, the paved drive aisle on the south side of the gravel area, and 30 paved parking spaces along the south property boundary as the proposed inventory storage area, which included 49,323 sq ft, slightly less than the maximum 20% allowance of 49,345 sq ft. (Slide 12)
 - Because the proposed inventory storage area occupies 20% or less of the subject site, no other inventory storage is allowed on the site unless completely enclosed within a building. Condition of Approval PDA 4 ensured that the Applicant shall not use any part of the site for inventory storage outside the designated and screened inventory storage area unless completely enclosed within a building.
- Per Code Section 4.155 (.02) K., all areas used for parking and maneuvering of cars shall be surfaced with asphalt, concrete, or other surface such as pervious materials that is found by the City's authorized representative to be suitable for the purpose. In all cases, suitable drainage, meeting standards set by the City's authorized representative, shall be provided. Therefore, the existing gravel building pad within the proposed inventory storage area must be paved.
 - In preparing this presentation, Staff realized that although Finding A28 of the DRB Staff report indicates that a condition of approval ensuring compliance with that standard was included, the condition was inadvertently left out of the Staff report. Therefore, Staff recommended adding the following Condition of Approval:

PDA 10. "Prior to Inventory Storage Area Use: As required by Subsection 4.155 (.02) K., the Applicant shall surface the existing unimproved building pad area on the south lot, which is proposed for use as an inventory storage area for

parking and maneuvering of cars, with asphalt, concrete, or other surface that is found by the City's authorized representative to be suitable for the purpose. See Finding A28."

- The inventory storage area must be screened to the high screen landscaping standard. As shown in the illustration on Slide 13, the Applicant proposed trees planted approximately 30 ft on center on the west, north, and northeast sides of the inventory storage area. Shrubs at least 6 ft in height planted 32 inches on center are proposed between and under the trees to provide a continuous screen that is 95% opaque year-round. Ground cover was proposed in a small area of landscape island south of the employee parking area at the northeast corner of the inventory storage area.
 - Existing landscaping provided the required screening on the southeast and south sides of the inventory storage area. The proposed landscaping, combined with some limited existing landscaping that would remain, met the required High Screen Landscaping standard for the inventory storage area.
- Per the compliance agreement negotiated between the City and Swickard Auto Group, the Applicant agreed to submit documents necessary to obtain a building permit to complete the paving and screening of the south gravel lot within 90 days of receiving DRB approval of the current application. Within six months of obtaining a building permit for the improvements, the Applicant agreed to complete the paving, and screening, and any other work listed as a condition of approval of the development application by the DRB. Additionally, the Applicant agreed to take any actions necessary to comply with the approved development application and any conditions of approval. The Applicant intended to construct the proposed improvements in one implementation phase promptly after land use approval.
- As previously mentioned, the Applicant was required to pave the inventory storage area. Because that area was larger than 5,000 sq ft in size, the Applicant was required to submit a stormwater report, including information and calculations to demonstrate how the proposed development met the stormwater treatment and flow control requirements. Further, a Site Plan that showed how stormwater would be managed must be submitted with the Public Works Permit application, and prior to final approval, the Public Works Permit storm facilities must be constructed, inspected, and approved by the City. Additionally, the application must record a stormwater access easement for the stormwater facility. Condition PFA 3 would ensure those requirements were met.
- Several conditions of approval were added to help ensure compliance with standards related to parking and outside inventory storage, which included the following:
 - Condition PDA 2 specified that "All aspects of the prior approval, 97DB23, including all Conditions of Approval not modified through the current application shall remain in effect."
 - Condition PDA 8 required "All access drives and travel lanes must be kept free and clear to ensure circulation standards are met, emergency access and access to the trash enclosure is unimpeded, and loading/unloading can occur on site."
 - Condition PDA 3. Due to ongoing compliance issues with parking management on the site, the Applicant had secured an off-site location for overflow inventory storage. Per the Applicant's narrative, this location included two, 5,000 sq ft sheds and 4.6 acres of

land for inventory storage. The Applicant provided a redacted copy of the lease agreement for an off-site location; however, the 6-month lease term, commencing on June 10, 2022, although renewable, expires on December 10, 2022, and the Applicant has not provided a copy of the renewed lease in their application materials.

- Based on discrepancies between City Staff's observations of number of cars parked on the site, which generally exceeded the Applicant's estimate of the amount of space needed to store inventory and meet parking needs, the current proposal, without the off-site storage location, would not resolve this compliance issue. Therefore, the compliance agreement described earlier was negotiated to ensure compliance. A draft of the compliance agreement was included in Exhibit A4 of the DRB Staff report. Condition PDA 3 would ensure the compliance agreement would be executed upon final approval of the current application by the DRB.
- Remaining Code compliance issues not already addressed in this presentation related to loading, unloading, used car sales, and parking of display vehicles.
 - Condition PDA 9. Regular blockage of the on-site loading zone on the north lot, in violation of the prior land use approval, has been an ongoing issue on the site. The conditions of approval and compliance agreement required the Applicant to reduce vehicle storage on site in order to keep the loading zone clear.
 - Additionally, the designated loading zone on SW Parkway Ave, adjacent to the site, was regularly blocked with parked cars from the Mercedes Benz dealership. To City Staff's knowledge, the Applicant had since ceased loading and unloading vehicles in the public street and was maintaining the on-street loading zone free of parked vehicles.
 - To ensure that loading and unloading did not again become a Code compliance issue, PDA 9 was included in the current application, specifying that "The Applicant shall keep the loading zone on the west side of Parkway Ave clear of parked vehicles at all times. Further, should the signs that designated this area as a loading zone be removed or need replacement, the Applicant shall immediately notify the City so that the signs could be promptly reinstalled."
 - Condition PDA 6. Per Code Section 4.131 (.02) B., no used car sales were permitted on the site except in conjunction with new dealerships within enclosed buildings. Therefore, although the Applicant currently maintained an inventory of used cars for sale on the subject site and proposed to continue that practice as part of the current application, no outside sales activity is permitted. All such inventory must be located within the inventory storage area or parking spaces designated for inventory vehicles, and all transactions associated with the sale of the vehicles must occur within the dealership building or online. Condition PDA 6 ensured compliance with that standard.
 - Condition PDA 5. Vehicles were not allowed on the plaza on the west side of the site next to Interstate 5, except for temporary vehicle parking, and the vehicles must be removed at the end of the retail business day. For a period of time after the City met with Mercedes Benz personnel about compliance issues, the vehicles were being moved as required; however, as time elapsed, vehicles were once again being left parked in the plaza overnight and not being moved daily. More recently, that

requirement appeared to be met; however, compliance was intermittent. Condition PDA 5 ensured ongoing compliance, stating “Vehicles are not allowed on the plaza next to Interstate 5 except for temporary vehicle parking for special events and any vehicles parked in this area shall be removed at the end of the retail business day.”

- Staff had reviewed the Applicant's analysis of compliance with previous approvals and the applicable criteria. The DRB Staff report adopted the Applicant's responses as Finding of Fact except as noted in the Findings. Based on the Finding of Fact and information included in the Staff report and information received from a duly advertised public hearing, Staff recommended that the DRB approve DB22-0005 with the recommended conditions of approval and the addition of new Condition PDA 10 as read into the record.

Daniel McKay confirmed that the 20% proposed for the new inventory storage area was 20% of the total space of both former sites as they were consolidated into one space. He asked if the counts for the number of parking spaces pertained solely to customer and employee parking, or if it also included inventory vehicles.

Ms. Luxhoj replied there was no limitation on how many cars could be parked within that area. It only needed to be paved but not striped for individual spaces. However, inventory vehicles could not be parked outside of that space.

Mr. McKay asked if there was a requirement for a lane that would allow vehicles to drive through the paved parking area.

Ms. Luxhoj understood that was not a requirement. When the Applicant had used the area for parking vehicles in the past, there were aisles in between that allowed them to maneuver the cars.

Mr. McKay asked if there was anything proposed that would prevent someone from driving around or through the inventory area.

Ms. Luxhoj replied not to her knowledge.

Rachelle Barrett asked if the only changes between the current site and what was proposed was the paving and labeling of parking spots.

Ms. Luxhoj clarified that Mercedes Benz had already been using the unpaved building pad space for the parking of inventory vehicles which was not allowed. Therefore, the application was to create an inventory storage area where that building pad was to bring that area into compliance for screening, paving for vehicles, and to designate parking spaces throughout the site for specific uses due to past issues of inconsistency between what the spaces were supposed to be used for in the initial plan and what the Applicant now wanted to use them for, such as the leasing of vehicles given how the business had evolved and demand had changed over time.

Ms. Barrett asked what recourse there was if the Applicant did not abide by the conditions of approval.

Ms. Luxhoj replied that so long as the conditions of approval were present, future deviation from those conditions would allow the City to cite them for Code violations and failure to comply.

Mr. McKay understood that the conditions cited the City could seek damages as well.

Ms. Barrett asked if there was a requirement for traffic flow within the vehicle inventory storage area.

Ms. Luxhoj replied the drive aisles around the vehicle inventory storage area had to be clear of parked vehicles, which had also been a problem in the past. As a result, a specific condition stated that the drive aisles needed to be kept free and clear to allow loading and unloading at the site, to allow emergency vehicle access, and to enable garbage truck access to garbage bins, all with room to maneuver without hitting parked cars.

Mr. McKay understood that the original approval considered the site as two sites, and the gravel area was going to be a separate building. Those two sites were now being combined with 20% of the total area to be parking. He asked what would happen if ownership changed and new owners wanted to put another dealership there, as he had not noticed anything that would limit that. He asked if DRB was being asked to approve inventory parking on a much larger area for a potential future dealership.

Kimberly Rybold, Senior Planner, explained that because this was a modification to the existing Stage 2 Plan, it effectively replaced the previously approved use of the pad for a future building with an inventory storage area. If a future owner wanted to do something different with the property in terms of layout or function, that would be subject to a subsequent Stage 1 or Stage 2 DRB review and approval.

Kathryn Neil asked if inventory would have to be moved indoor if a new building was constructed.

Ms. Rybold replied that would depend upon the use and whether or not it triggered a modification to the existing Stage 1 or Stage 2 Plan. Stage 1 contained the standards that the site was originally improved under; modification of those standards could potentially trigger further review and approval.

Chair Svadlenka noted on Page 7 of the Staff report, the paragraph under the heading Outstanding Code Compliance Issue, Loading/Unloading in Public Street, the last sentence stated, "Because the Applicant requested and the City agreed to remove on-street parking and designate an on-street loading zone in this location, and install signs and to ensure that

loading/unloading does not again become a Code compliance issue, a Condition of Approval is included in the current application." She asked where the on-street parking was removed.

Ms. Luxhoj displayed the Existing Site Plan provided by the Applicant and explained that on the west side of Parkway Ave, there was a designated loading zone. The City had installed two signs at the north and south ends of that loading zone. One sign disappeared mysteriously and was replaced by the City. The area was meant to provide the dealership a place to load and unload on Parkway Ave; however, when the sign disappeared, employees began parking there, which brought up the compliance issue. Using the area as a parking space rendered it unfit for the intended purpose and loading and unloading was shifted to the middle of the street, blocking traffic.

Chair Svadlenka asked if the loading/unloading zone was designated within the original application.

Ms. Luxhoj explained it was not because originally, loading and unloading would take place on-site, but a number of years ago, when employees started parking there and the loading/unloading zone was not being used, the City agreed to install the loading zone signs to keep people from parking there.

Chair Svadlenka understood that having a renewed lease for an off-site location to store vehicles was not required. It was simply that with the compliance agreement there could not be illegal storage of inventory.

Amanda Guile-Hinman, City Attorney, noted that a condition of approval addressed the number of cars on-site. With the number of cars presently on-site, without the off-site storage location, the Applicant would not meet that condition of approval. The compliance agreement stated that the Applicant must meet the development approval at the DRB. It gave the Applicant the time necessary to do the paving and screening without going through the compliance action currently pending in the City's municipal court.

Ms. Barrett asked if the cul-de-sac in the Site Plan was included in the parking.

Ms. Luxhoj responded it was not, but employees and others could park there so long as they did not block driveways or mailboxes, which had been an issue in the past and why Staff had required at least 40 designated on-site parking spaces for employees be built and clearly marked as employee only. She confirmed there were two driveways to the back employee parking lot, a main driveway and a lane that was used primarily as fire access.

Chair Svadlenka called for the Applicant's presentation.

Eric Iversen, Swickard Auto Group, stated he was the owner and operator of the Mercedes dealership in Wilsonville. He appreciated Staff's very thorough presentation, and noted that

although they had covered most of the items he had, he could provide more details on questions.

- The dealership had been open and operating for 24 years. Swickard Auto Group was the third owner and had acquired it approximately a decade ago. It was Swickard's first store, so it was special to them.
- Their purpose tonight was to bring the store into compliance for a number of reasons, management, parking, and landscaping, all of which revolved around number of cars, storage, and how those things had changed in the automotive industry over the past 24 years. Twenty-four years ago, nobody anticipated that Covid would happen and result in a shortage of cars for sale and a shortage of parts to fix cars, which led to cars sitting and waiting to be serviced. During the recession in 2008/2009, dealers significantly reduced their inventories, something nobody expected in 1997. All that was to say that things were always changing, and Swickard Auto Group was doing its best with this application to get into compliance. That was really what they wanted to do.
- Regarding future development, he could not say what might happen, but they would have to go through a review process. If Swickard Auto Group wanted to develop more dealerships on that site, they would have to go vertical, and he had no idea what that would look like. Presently, however, they needed to get the Mercedes store working the way it was supposed to, and the point of the subject application before the DRB tonight.
- He reiterated that Staff had done a great job detailing the site as far as access, parking, and storage. He elaborated on the storage area, noting that the public would not have access to it. They did not want the public driving through there, so it would be gated or blocked. Currently vehicles were parked in a somewhat organized fashion with a drive aisle or two, but the new design would feature cars double and triple parked as they were at almost all auto dealerships. That was why porters were employed to move them properly around the lot.
- He noted their lease would auto-renew in December, so there would not be a new lease for the off-site parking. A new lease would have required him to cancel the existing lease on November 6, which he obviously did not do. It was simply that the landlord required six-month leases. It was Swickard Auto Group's intent to keep renewing the lease as long as they needed it, that a repeat of 2008/2009 did not happen but if it did, they would no longer have a storage issue.
- He believed the proposed landscaping met Code, and they were completely fine with paving the gravel pad.
- He requested one modification to Condition PFA3, adding “, if required.” to the last sentence regarding the easement. (Page 13 of 39, Staff Report) They did not have the stormwater facility designed yet as it would come in the construction plans. The DRB had the diagrammatical plans, so it was hard to commit to an easement now. He understood they had to meet Code, but if they did a detention structure or something else that required an easement, they could not get a permit until they gave that easement. He could not commit to an easement tonight when they had no plans yet, but Code would be met.
- He reiterated Staff had done a great job on their presentation, and he appreciated that. They had worked with Staff very hard since pre-Covid to arrive at this point and he hoped everything was ironed out to make it easier for the DRB.

Ms. Neil noted there were 44 proposed employee parking spots. She asked how many employees the dealership had and where excess employees would park.

Mr. Iversen stated that while they did employ more than 44 people, not all were working at the same time. On any given day, it could be plus or minus that number. While the employment count was significantly higher, it was not an office where everyone showed up and left at the same time. Due to the nature of the business, people worked in shifts anywhere from 6 a.m. until they closed at night. He confirmed that the new general manager would monitor parking.

Mr. McKay thanked Mr. Iversen for his clarifications on questions. He noted that Mr. Iversen had stated that there would be no public access to the new vehicle storage area. He had driven by with his own small vehicle, and noticed how tight it was, and asked if the Applicant was opposed to a condition requiring signage that stated something along the lines of "Employee Access Only" to prevent people from accidentally entering the area.

Mr. Iversen said he would agree to a condition that required a sign, but with the exact verbiage to be determined at a later date.

Chair Svadlenka asked if the cars displayed in the plaza would go into the storage area at the close of business each evening.

Mr. Iversen replied they would either go there or onto the second floor of the building where they also had vehicle storage. He anticipated that most nights, the plaza vehicles would ideally go up the ramp to the second floor of the building.

Chair Svadlenka asked how many vehicles would fit in the new storage area.

Mr. Iversen replied that was difficult to gauge. He explained porters were more skilled than him, as he had gotten himself trapped on an auto dealership lot as an employee, but he anticipated approximately 200 cars, give or take, depending on how the porters parked them. Inventory also fluctuated over time, and especially post-Covid. There could be days when storage was packed and days when it was not.

Chair Svadlenka stated she was curious because she saw on the Applicant's website that there were approximately 289 new and used vehicles at the Wilsonville property, and with that number of cars, off-site parking would be needed as well.

Mr. Iversen agreed, adding that was where their inventory currently was now. That off-site inventory area was for the double and triple-parked cars and brand-new inventory coming in off the truck. When new cars arrive from the factory, they need to be washed and readied for sale. Those cars were brought over one at a time from the off-site parking and turned into active inventory. The off-site parking was critical for the subject location just as it was for Swickard Auto Group's other locations. They always had off-site parking.

Chair Svadlenka called for public testimony regarding the application and confirmed with Staff that no one was present at City Hall to testify and no one on Zoom indicated they wanted to testify.

Ms. Barrett asked if the subject proposal would help the dealership meet the unapproved used car sales Code compliance issue.

Ms. Luxhoj explained a condition stipulated that all car sales, new or used, must take place on the subject property within the building, or online, and not outside or in the inventory storage area. Technically used car sales were not allowed, but Staff was making a concession in that respect to allow the used car sales to continue.

Ms. Barrett stated she believed signage that kept the public out of the vehicle storage area would help in that regard.

Ms. Rybold clarified that used car sales were prohibited uses in the PDC zone except in conjunction with new car dealerships within enclosed buildings. That condition prohibited that used car sale from occurring anywhere except in conjunction with the new car sale occurring within the enclosed building, so it was a condition to reinforce the existing Code standard, which otherwise would not allow for the used car sales on the site. She further clarified that the prior Code did not address online sales specifically, but required that for on-site, whatever was happening physically at the dealership had to be conducted within the enclosed building.

Chair Svadlenka asked Staff to comment on the Applicant's request to modify PFA3 with the language "if required" regarding a potential easement.

Amy Pepper, Development Engineering Manager, stated that the request was acceptable. The maintenance agreement and access easement were standard operating procedure for any stormwater facility. In the future, Staff would go out and inspect those facilities so that an easement was recorded over those facilities. As such, it was fine to include the Applicant's requested language.

Mr. McKay stated he believed the DRB should consider that request as an amendment to the conditions. For the condition of approval modification for the new storage area, he suggested something like, "The Applicant shall install appropriate signage at any ingress or egress stating that access is for employees only or otherwise not open to public access." However, Staff could craft the wording to get at the essence of it.

Ms. Luxhoj suggested new Condition PDA 11, under the Stage 2 could state, "Prior to inventory storage area use, signage shall be installed at the inventory storage area entries and exits to discourage public access." She noted the language could be further modified.

Mr. McKay suggested similar signage at the entrance to the employee parking unless there would also be areas within or near there that would be for the public.

Ms. Luxhoj explained parking spaces would be included along the south property boundary in the inventory storage area, specifically for inventory parking. However, the public would need to be able to access all of the other parking spaces on the site.

Mr. McKay stated his primary concern was to avoid having the public being trapped in the inventory area.

Ms. Luxhoj indicated on the Site Plan areas of ingress and egress, noting where the public should not be permitted to venture into as it would be for inventory storage specifically. She confirmed where cars would be double or triple-parked while employees, customers, and service vehicles would park in designated spots. The idea was to have signage at the primary entrances to the storage area stating something like No Public Access Allowed.

Ms. Rybold understood new Condition PDA 11, "Prior to inventory storage area use, signage shall be installed at the inventory storage entry and exit points to prohibit public access."

Mr. McKay believed that verbiage conveyed the intent and left the actual wording to the Applicant. As long as the intent was clear, and the condition stated it should be clear, it was okay.

Chair Svadlenka confirmed there were no further questions or discussion and closed the public hearing at 7:42 pm.

Rachelle Barrett moved to approve the Staff report with the amendments read into the record by Staff, amending PFA 3 and adding Conditions PDA 10 and PDA 11. Daniel McKay seconded the motion.

The following amendments were made to the Staff report:

(Note: Additional language in bold italic text; deleted language struck through)

- Amend the last sentence of Condition of Approval PFA 3 to state, "A site plan showing how stormwater will be managed shall be submitted with the Public Works Permit application, ***if required.***"
- Add Condition of Approval PDA 10. "Prior to Inventory Storage Area Use: As required by Subsection 4.155 (.02) K., the Applicant shall surface the existing unimproved building pad area on the south lot, which is proposed for use as an inventory storage area for parking and maneuvering of cars, with asphalt, concrete, or other surface that is found by the City's authorized representative to be suitable for the purpose. See Finding A28."
- Add new Condition PDA 11, stating, "Prior to inventory storage area use: Signage shall be installed at the inventory storage entry and exit points to prohibit public access."

The motion passed 4 to 0.

Kathryn Neil moved to adopt Resolution No. 409 approving with conditions the requested applications and incorporating the amended and adopted Staff report. The motion was seconded by Rachelle Barrett and passed 4 to 0.

Chair Svadlenka read the rules of appeal into the record.

Board Member Communications:

3. Recent City Council Action Minutes

Rachelle Barrett noted the recent computer changeover for the City's water billing and asked how it went.

Kimberly Rybold, Senior Planner, believed it was related to the new permitting system and software. She did not work on the water end of things and could not speak to it specifically, but knew the pieces that impacted Planning Staff, such as permitting, was going along. Overall, new software systems were helpful, but there were always kinks to work out and Staff was working through those.

Board members discussed how auto pay was not going through, although Mr. McKay noted it did work. Staff advised that with the new utility billing software, old autopay accounts did not rollover and people would need to sign up again.

Staff Communications

Kimberly Rybold, Senior Planner, announced that tonight was the last DRB Panel A meeting in 2022. Several development applications were in, but none were ready to be scheduled.

- She expressed Staff's appreciation for Daniel McKay serving on Panel A for four years. Over the years, he had asked many thoughtful and helpful questions for the Board which helped flesh out details in various applications and offered good insight into potential conditions that ultimately created a better product in the end. Staff was grateful for that and for his time as Chair, and although he had gotten thrown into that role earlier than most DRB members, he had done a great job getting up to speed and leading the Panel through a handful of meetings, some straightforward and some a little more interesting. With that, she presented Mr. McKay with a Certificate of Appreciation and card signed by Staff.
- She also recognized Ben Yacob, who was not present this evening, but tonight would have been his last meeting as well. Staff had a Certificate of Appreciation for his service on the Panel as well.
- She noted that between Panel A and Panel B, there would be a handful of new faces coming up and Staff would likely conduct a training to bring cohesiveness to the process and help Board members do their job better.

Daniel McKay said he had had an amazing experience, adding he would always remember the marathon session meeting the Board had that lasted until 1 a.m. and then had to be continued. It had been quite the experience. He thanked everyone for an awesome experience.

Adjourn

The meeting adjourned at 7:54 p.m.

Respectfully submitted,

Paula Pinyerd, ABC Transcription Services, LLC. for
Shelley White, Planning Administrative Assistant

Public Hearing:

2. **Resolution No. 410. ESS Parking Lot Expansion Project.** The applicant is requesting approval of a Stage 2 Final Plan Modification and Site Design Review for a parking lot expansion for the ESS building located at 26440 SW Parkway Avenue.

Case Files:

DB22-0008 ESS Parking Lot Expansion Project

- Stage 2 Final Plan Modification (STG222-0008)
- Site Design Review (SDR22-0008)

**DEVELOPMENT REVIEW BOARD
RESOLUTION NO. 410**

A RESOLUTION ADOPTING FINDINGS AND CONDITIONS OF APPROVAL, APPROVING A STAGE 2 FINAL PLAN MODIFICATION AND SITE DESIGN REVIEW FOR A PARKING LOT EXPANSION FOR THE ESS BUILDING LOCATED AT 26440 SW PARKWAY AVENUE

WHEREAS, an application, together with planning exhibits for the above-captioned development, has been submitted by authorized representative Desmond Amper LRS Architects, on behalf of the owner, Parkway Woods, LLC, in accordance with the procedures set forth in Section 4.008 of the Wilsonville Code, and

WHEREAS, the subject site is located at 26440 SW Parkway Ave on Tax Lot 0512, Section 12, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon, and

WHEREAS, the Planning Staff has prepared the staff report on the above-captioned subject dated December 29, 2022, and

WHEREAS, said planning exhibits and staff report were duly considered by the Development Review Board Panel A at a scheduled meeting conducted on January 9, 2023, at which time exhibits, together with findings and public testimony were entered into the public record, and

WHEREAS, the Development Review Board considered the subject and the recommendations contained in the staff report, and

WHEREAS, interested parties, if any, have had an opportunity to be heard on the subject.

NOW, THEREFORE, BE IT RESOLVED that the Development Review Board of the City of Wilsonville does hereby adopt the staff report dated December 29, 2022, attached hereto as Exhibit A1, with findings and recommendations contained therein, and authorizes the Planning Director to issue permits consistent with said recommendations for:

DB22-0008 ESS Parking Lot Expansion: Stage 2 Final Plan Modification (STG222-0008) and Site Design Review (SDR22-0008).

ADOPTED by the Development Review Board of the City of Wilsonville at a regular meeting thereof this 9th day of January, 2023, and filed with the Planning Administrative Assistant on _____. This resolution is final on the 15th calendar day after the postmarked date of the written notice of decision per *WC Sec 4.022(.09)* unless appealed per *WC Sec 4.022(.02)* or called up for review by the Council in accordance with *WC Sec 4.022(.03)*.

_____,
Jean Svadlenka, Acting Chair - Panel A
Wilsonville Development Review Board

Attest:

Shelley White, Planning Administrative Assistant



Exhibit A1
Staff Report
Wilsonville Planning Division
ESS Parking Lot Expansion

Development Review Board Panel 'A'
Quasi-Judicial Public Hearing

Hearing Date:	January 9, 2023
Date of Report:	December 29, 2022
<hr/>	
Application Nos.:	DB22-0008 Wilsonville Industrial Yard - Stage 2 Final Plan Modification (STG222-0008) - Site Design Review (SDR22-0008)
Request/Summary:	The requests before the Development Review Board include a Stage 2 Final Plan Modification, and Site Design Review for an 83 space parking lot expansion, minor modifications to the loading dock area, and associated site improvements.
Location:	26440 SW Parkway Ave. The property is specifically known as Tax Lot 0512, Section 12, Township 3 South, Range 1 West, Willamette Meridian, Clackamas County, Oregon.
Owner/Applicant:	Parkway Woods, LLC (Bill Naito Company)
Applicant's Representative:	LRS Architects (Contact: Desmond Amper)
Comprehensive Plan Designation:	Industrial
Zone Map Classification:	Planned Development Industrial (PDI)
Staff Reviewers:	Georgia McAlister, Associate Planner Amy Pepper, Development Engineering Manager Kerry Rappold, Natural Resources Program Manager
Staff Recommendation:	<u>Approve with conditions</u> the requested Stage 2 Final Plan Modification and Site Design Review.

Applicable Review Criteria:

<u>Development Code:</u>	
Section 4.008	Application Procedures-In General
Section 4.009	Who May Initiate Application
Section 4.010	How to Apply
Section 4.011	How Applications are Processed
Section 4.014	Burden of Proof
Section 4.031	Authority of the Development Review Board
Section 4.034	Application Requirements
Subsection 4.035 (.04)	Site Development Permit Application
Subsection 4.035 (.05)	Complete Submittal Requirement
Section 4.110	Zones
Section 4.117	Standards Applying to Industrial Development in All Zones
Section 4.118	Standards Applying to Planned Development Zones
Section 4.135	Planned Development Industrial (PDI) Zone
Section 4.140	Planned Development Regulations
Section 4.154	On-site Pedestrian Access and Circulation
Section 4.155	Parking, Loading, and Bicycle Parking
Section 4.167	Access, Ingress, and Egress
Section 4.171	Protection of Natural Features and Other Resources
Section 4.175	Public Safety and Crime Prevention
Section 4.176	Landscaping, Screening, and Buffering
Section 4.177	Street Improvement Standards
Section 4.179	Mixed Solid Waste and Recyclables Storage
Section 4.199	Outdoor Lighting
Sections 4.300 through 4.320	Underground Utilities
Sections 4.400 through 4.450 as applicable	Site Design Review
Sections 4.600 through 4.640 as applicable	Tree Preservation and Protection
<u>Other Planning Documents:</u>	
Wilsonville Comprehensive Plan Previous Land Use Approvals	

Vicinity Map



Background:

The subject property comprises Tax Lot 0512 and is located at 26440 SW Parkway Ave. The business located at the property, ESS, is a rapidly growing manufacturing and warehousing operation. Since the construction of the warehouse in 1980 (80DR22) the needs of the business have changed. Due to the growth in employment the current parking is not sufficient to meet the needs of ESS. The property was once a part of the larger industrial park to the south, Parkway Woods, before a partition in 2018 (AR18-0008). Prior to the partition the parking area to the south was shared between the buildings within the industrial park. With the partition the parking lot expansion is necessary to accommodate employee parking, as the shared parking is no longer utilized. The parking lot expansion will allow the site to meet current minimum parking requirements.

Summary:

Modification to Stage 2 Final Plan (STG222-0008)

The Stage 2 Final Plan Modification reviews the addition of 83 parking spaces and the resulting changes to landscaping and site function, including a minor loading dock modification. This review ensures the modifications meet or exceed all applicable City standards.

Site Design Review (SDR22-0008)

The existing warehouse building on the northwest corner of the property is proposed to remain without improvements. Therefore, Site Design Review focuses on parking, pedestrian access, and landscaping throughout the site. The landscaping includes the installation of 11 trees and planted storm water swales to the north of the parking area. Existing vegetation along the northern property line helps screen the parking from offsite visibility. The proposed 83 parking spaces are designed to meet the City's parking standards. A crosswalk has been provided from the parking area to the north building entrance. A condition of approval will ensure a safe path is provided along the parking area to the crosswalk.

Neighborhood and Public Comments:

No public comments have been received.

Discussion Points – Verifying Compliance with Standards:

This section provides a discussion of key clear and objective development standards that apply to the proposed applications. The Development Review Board will verify compliance of the proposed applications with these standards.

Review Process

More than 10 parking spaces are proposed for installation therefore requiring DRB review per Development Code Section 4.130 (.01) B. 1.

Parking

The applicant proposes 83 parking spaces for this project to meet minimum parking standards and provide adequate spaces for the employees at ESS. The site was developed as part of the larger Parkway Woods industrial campus to the south and currently has 162 parking spaces; however, the parking minimum for the site based on the approved manufacturing and warehouse uses is 251 parking spaces. The addition of 83 parking spaces as well as the restoration of 18 spaces will increase the total parking spaces to 263, exceeding the parking minimum for the site. No additional bicycle parking spaces are proposed.

Pedestrian Access and Circulation

The addition of 83 parking spaces necessitates review of the pedestrian access and circulation on site, as these spaces will be located to the north of the existing building where there is not currently parking or pedestrian access. Safe and direct pedestrian connections must be provided from the parking area to the entrance of the building. A crosswalk from the parking area is proposed for safe pedestrian access. A condition of approval will ensure that a sidewalk is provided along the parking area for a safe pathway to the proposed crosswalk.

Conclusion and Conditions of Approval:

Staff has reviewed the applicant's analysis of compliance with the applicable criteria. The staff report adopts the applicant's responses as Findings of Fact except as noted in the Findings. Based on the Findings of Fact and information included in this staff report, and information received from a duly advertised public hearing, staff recommends that the Development Review Board recommend approval to City County or approve, as relevant, the proposed application (DB22-0008) with the following conditions:

Planning Division Conditions:

Request A: Stage 2 Final Plan Modification (STG222-0008)

PDA 1.	General: The approved final plan shall control the issuance of all building permits and shall restrict the nature, location and design of all uses. Minor changes in an approved final development plan may be approved by the Planning Director through the Class 1 Administrative Review Process if such changes are consistent with the purposes and general character of the development plan. All other modifications, including extension or revision of a staged development schedule, shall be processed in the same manner as the original application and shall be subject to the same procedural requirements.
PDA 2.	Prior to Issuance of Building Permits: A pedestrian pathway demonstrating compliance with the requirements of Section 4.154 shall be provided, allowing safe and convenient pedestrian access from all 83 parking spaces to the north entrance of the building. See Finding A21.
PDA 3.	Prior to Issuance of the Public Works Permit: A list of all proposed plant species for the landscaping and storm water swales must be provided to and approved by the City. See Finding A32 and A35.
PDA 4.	Prior to Issuance of Building Permits: A Circulation Plan showing the path of the trucks to the loading docks and pedestrians to the entrance of the building must be submitted to the City. See Finding A27.

Request B: Site Design Review (SDR22-0001)

PDB 1.	Ongoing: Construction, site development, and landscaping shall be carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents. Minor revisions may be approved by the Planning Director through administrative review pursuant to Section 4.030. See Finding B3.
PDB 2.	Prior to Parking Lot Use: All landscaping required and approved by the Development Review Board shall be installed prior to use of the proposed parking area unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In

	such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Development Review Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City will be returned to the applicant. See Finding B10.
PDB 3.	Ongoing: The approved landscape plan is binding upon the applicant/owner. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, pursuant to the applicable sections of Wilsonville’s Development Code. See Findings B11 and B13.
PDB 4.	Ongoing: All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Development Review Board, unless altered as allowed by the Wilsonville Development Code. See Finding B12.

The following Conditions of Approval are provided by the Engineering, Natural Resources, or Building Divisions of the City’s Community Development Department, or Tualatin Valley Fire and Rescue, all of which have authority over development approval. A number of these Conditions of Approval are not related to land use regulations under the authority of the Development Review Board or Planning Director. Only those Conditions of Approval related to criteria in Chapter 4 of Wilsonville Code and the Comprehensive Plan, including but not limited to those related to traffic level of service, site vision clearance, recording of plats, performance standards, and concurrency, are subject to the Land Use review and appeal process defined in Wilsonville Code and Oregon Revised Statutes and Administrative Rules. Other Conditions of Approval are based on City Code chapters other than Chapter 4, state law, federal law, or other agency rules and regulations. Questions or requests about the applicability, appeal, exemption or non-compliance related to these other Conditions of Approval should be directed to the City Department, Division, or non-City agency with authority over the relevant portion of the development approval.

Engineering Division Findings and Conditions:

PFA 1.	Public Works Plans and Public Improvements shall conform to the “Public Works Plan Submittal Requirements and Other Engineering Requirements” in Exhibit C1.
PFA 2.	Prior to the Issuance of Public Works Permit: A final stormwater report shall be submitted for review and approval. The stormwater report shall include information and calculations to demonstrate how the proposed development meets the treatment, flow control and source control requirements. The applicant shall submit complete construction drawings showing how site improvements will comply with the treatment, flow control and source control requirements, including necessary signage for interior transfer areas.
PFA 3.	Prior to Issuance of the Public Works Permit: Applicant shall obtain a Local Erosion Control Permit from the City of Wilsonville. All erosion control measures shall be in place prior to starting any construction work, including any demolition work. Tree

protection fencing shall be installed, inspected and approved prior to the installation of erosion control measures. Permits shall remain active until all construction work is complete and the site has been stabilized.

PFA 4. **Prior to Any Paving:** Onsite stormwater facilities must be constructed and vegetated facilities planted. **Prior Issuance of Final Building Certificate of Occupancy:** The applicant must execute and record with the County a Stormwater Maintenance and Access Easement Agreement with the City.

Master Exhibit List:

Entry of the following exhibits into the public record by the Development Review Board confirms its consideration of the application as submitted. The list below includes exhibits for Planning Case File No. DB22-0008 and reflects the electronic record posted on the City's website and retained as part of the City's permanent electronic record. Any inconsistencies between printed or other electronic versions of the same exhibits are inadvertent and the version on the City's website and retained as part of the City's permanent electronic record shall be controlling for all purposes.

Planning staff Materials

- A1. Staff report and Findings (this document)
- A2. Staff's Presentation Slides for Public Hearing (to be presented at Public Hearing)

Materials from Applicant

B1. Applicant's Narrative and Materials

Application Form

Narrative

Ownership Information

B2. Applicant's Drawings and Plans

C0.00 General Notes

C0.01 Site Plan

C1.00 Existing Conditions and Demolition Plan

C1.01 Existing Conditions and Demolition Plan

C2.00 Site Layout and Stormwater Plan

C2.01 Site Layout and Stormwater Plan

C3.00 Grading Plan

C3.01 Grading Plan

C4.00 Swale Sections

B3. Stormwater Report

B4. Infiltration Report

Development Review Team Correspondence

- C1. Public Works Plan Submittal Requirements and Other Engineering Requirements

Procedural Statements and Background Information:

1. The statutory 120-day time limit applies to this application. The application was received on August 1, 2022. Staff conducted a completeness review within the statutorily allowed 30-day review period and found the application incomplete on August 26, 2022. The applicant submitted additional materials on September 15, 2022, and Planning staff deemed the application complete on October 13, 2022. The City must render a final decision for the request, including any appeals, by January 28, 2022.

2. Surrounding land uses are as follows:

Compass Direction	Zone	Existing Use
North	FDA-H/PDI	Undeveloped/Sysco
East	PDI	Open Space
South	PDI	Parkway Works Industrial
West	N/A	I-5 Freeway

3. Previous Planning Approvals:

- 74RZ03 Zone Change
- 79DR35 Site Plan Approval
- 80DR22 Stage II Final Plan
- 88AR40 Partition
- 91AR59 Architectural Modification to Building 83
- 97AR14 Architectural Modification to Building 83
- 97AR13 Architectural Modification to Building 83
- 97AR56 Architectural Modification to Building 83
- 97AR73 Architectural Modification to Building 83
- 97DB18 Stage II Final Plans and Site Design
- 97DB35 Stage II Final Plan, Site Design Plans for Parking Lot
- 97TR37 Type C Tree Removal
- AR15-0031 Tentative Partition Plat
- AR15-0049 Final Partition Plat
- AR16-0037 Tentative Partition Plat
- AR18-0008 Final Partition Plat

4. The applicant has complied with Sections 4.008 through 4.011, 4.013-4.031, 4.034 and 4.035 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.

Findings:

NOTE: Pursuant to Section 4.014 the burden of proving that the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case.

General Information

Application Procedures - In General Section 4.008

The application is being processed in accordance with the applicable general procedures of this Section.

Initiating Application Section 4.009

The application has been submitted on behalf of the property owner Parkway Woods LLC, and is signed by Diane McMahon, an authorized representative.

Pre-Application Conference Subsection 4.010 (.02)

A pre-application conference was held on June 9, 2022 (PRE22-0005) in accordance with this subsection.

Lien Payment before Approval Subsection 4.011 (.02) B.

No applicable liens exist for the subject property. The application can thus move forward.

General Submission Requirements Subsections 4.035 (.04) A. and 4.035 (.05)

The applicant has provided all of the applicable general submission requirements contained in this subsection.

Zoning - Generally Section 4.110

The proposed development is in conformity with the applicable zoning district and City review uses the general development regulations listed in Sections 4.140 through 4.199.

Request A: Modification to Stage 2 Final Plan (STG222-0008)

As described in the Findings below, the request meets the applicable criteria or will by Conditions of Approval.

Planned Development Regulations

Planned Development Purpose
Subsection 4.140 (.01)

A1. The proposed Stage 2 Final Plan Modification for development of the site is consistent with the Planned Development Regulations purpose statement.

Planned Development Lot Qualifications
Subsection 4.140 (.02)

A2. The subject property is of sufficient size (24.8 acres) to be developed in a manner consistent with the purposes and objectives of Section 4.140. It allows for development of the proposed uses while meeting applicable landscaping and other site requirements indicating it is of sufficient size.

Ownership Requirements
Subsection 4.140 (.03)

A3. The subject property is in a single ownership by Parkway Woods, LLC (Bill Naito Company) and is signed by an authorized representative Diane McMahon of Bill Naito Company.

Professional Design Team
Subsection 4.140 (.04)

A4. As can be found in the applicant's submitted materials the design team is composed of appropriate professionals, including survey, geotechnical engineering, civil and landscape, architectural, and a commercial general contractor.

Planned Development Permit Process
Subsection 4.140 (.05)

A5. The subject property is greater than 2 acres, is zoned Planned Development Industrial and, is designated Industrial in the Comprehensive Plan.

Consistency with Comprehensive Plan and Other Applicable Plans
Subsections 4.140 (.06) and 4.140 (.09) J. 1.

A6. The proposal to expand the parking area for an existing industrial development and is consistent with the comprehensive plan as well as the prior plan approvals.

Modification to Stage 2 Final Plan Submission Requirements and Process

Stage 2 Final Plan

Subsection 4.140 (.09) A-K

- A7.** The Stage 2 Final Plan was approved in the appropriate manner and timeline. The proposed project is a modification to the Stage 2 Final plan.

Development Review Board Role

Subsection 4.140 (.09) B.

- A8.** The Development Review Board is considering all applicable permit criteria set forth in the Wilsonville Development Code and staff is recommending the Development Review Board approve the application with Conditions of Approval.

Modification to Approved Plans

Subsection 4.140 (.10) A.

- A9.** The proposed modifications to the Stage 2 Final Plan are to be reviewed by the Development Review Board according to this standard.

Standards Applying to All Planned Development Zones

Additional Height Guidelines

Subsection 4.118 (.01)

- A10.** No new buildings are proposed as part of the current application; therefore, this standard does not apply.

Underground Utilities

Subsection 4.118 (.02)

- A11.** No changes to utilities are proposed for this project.

Waivers

Subsection 4.118 (.03) A. through D.

- A12.** The applicant has not requested any waivers to the standards applying to all planned development zones.

Other Requirements or Restrictions

Subsection 4.118 (.03) E.

- A13.** No additional requirements or restrictions are recommended pursuant to this subsection. Performance standards and requirements of the PDI zone address potential impacts from noise, odor, glare, etc.

Habitat Friendly Development Practices

Subsection 4.118 (.09)

- A14.** Grading will be limited to that needed for the proposed improvements, no significant native vegetation would be retained by an alternative site design, the City's stormwater

standards will be met thus limiting adverse hydrological impacts on water resources, and no impacts on wildlife corridors or fish passages have been identified.

Planned Development Industrial (PDI) Zone

Purpose of Planned Development Industrial (PDI) Zone

Subsection 4.135 (.01)

A15. The proposed parking lot supports the existing industrial operation consistent with the purpose stated in this subsection.

Typically Permitted Uses

Subsection 4.135 (.03)

A16. The existing uses are consistent with the permitted uses in the PDI zone, including industrial manufacturing and production.

Block and Access Standards

Subsections 4.135 (.04) and 4.131 (.03)

A17. No changes to blocks or access are proposed.

PDI Performance Standards

Industrial Performance Standards

Subsections 4.135 (.05) A. through N.

A18. The proposed project meets the performance standards of this subsection as follows:

- **Pursuant to Standard A** (enclosure of uses and activities), the parking will be used to accommodate the existing industrial manufacturing use.
- **Pursuant to Standard B** (vibrations), there is no indication that the proposed development will produce vibrations detectable off site without instruments.
- **Pursuant to Standard C** (emissions), there is no indication that odorous gas or other odorous matter will be produced by the proposed use.
- **Pursuant to Standard D** (open storage), there is no storage proposed.
- **Pursuant to Standard E** (operations and residential areas), the site is not adjacent to any residential areas.
- **Pursuant to Standard F** (heat and glare, exterior lighting), no exterior operations are proposed creating heat and glare, and no exterior lighting is proposed that would produce light on adjacent residential uses.
- **Pursuant to Standard G** (dangerous substances), there are no prohibited dangerous substances expected on the development site.
- **Pursuant to Standard H** (liquid and solid wastes), there is no evidence that the standards for liquid and solid waste will be violated.
- **Pursuant to Standard I** (noise), there is no evidence that noise generated from the proposed operations will violate the City's Noise Ordinance.

- **Pursuant to Standard J** (electrical disturbances), no functions or construction methods are proposed that would interfere with electrical systems, and any construction activity that may require temporary electrical disruption for safety or connection reasons will be limited to the project site and coordinated with appropriate utilities.
- **Pursuant to Standard K** (discharge of air pollutants), there is no evidence that any prohibited discharge will be produced by the proposed project.
- **Pursuant to Standard L** (open burning), no open burning is proposed on the development site.
- **Pursuant to Standard M** (outdoor storage), no outdoor storage is proposed.
- **Pursuant to Standard N** (unused area landscaping), the subject site will be completely developed with landscaping, and other site improvements.

Other Standards for PDI Zone

Lot Size and Maximum Lot Coverage

Subsections 4.135 (.06) A. and B.

A19. The subject site is of sufficient size to accommodate the proposed parking lot expansion, stormwater facility, landscaping, and other improvements.

Setbacks

Subsections 4.135 (.06) C. through E.

A20. The existing building on the property meets the applicable setback standards of the PDI zone.

On-site Pedestrian Access and Circulation

Continuous Pathway System, Vehicle Pathway Separation, Width and Surface, Pathway Signs

Subsection 4.154 (.01) B.1. through B.6.

A21. A clearly marked crosswalk from the parking area to the existing building will provide access to the existing building for pedestrians. However, sidewalks are not proposed to allow safe and direct access from all parking spaces to the crosswalk. A condition of approval will require the applicant to provide a pedestrian pathway serving the 83 parking spaces that provides safe and direct access for pedestrians using the parking area. New striping near the ADA spaces will also improve access for those using the spaces. Compliance with all adopted pedestrian access and circulation standards for the existing parking area has been reviewed through previous land use decisions.

Parking Standards

Parking, Loading and Bicycle Parking Purpose

Section 4.155 (.01) A-C.

A22. The addition of the 83 parking spaces is to be located to the north of the existing building. The expansion will service the needs of the existing development. Safe access will be

provided from the parking area to the building. A landscape buffer along the front of the new parking stalls will be provided. The existing vegetation along the north property line will provide adequate screening, protecting the parking from offsite visibility. Stormwater treatment and detention swales are to be installed to address stormwater pollution and detention standards.

Parking, Loading and Bicycle Parking General Regulations

Section 4.155 (.02)

A23. All new proposed parking stalls are designed to meet Development Code standards. The parking area is to be surfaced with asphalt and accessible via the existing driveways and drive aisle. The addition of the 83 parking spaces and restoration of 18 previously approved spaces will meet minimum parking standards for the site. No variances or waivers have been requested as a part of this application.

Parking Landscaping – 10% of Area Landscaped

Section 4.155 (.03) B.1

A24. The proposed parking area is approximately 18,900 SF. For parking areas greater than 650 SF 10% of the area is required to be landscaped. The proposed parking area will have 3,600 SF of landscaped space which is 19% of the proposed parking area.

Parking Landscaping – Trees

Section 4.155 (.03) B.2

A25. One landscape tree is required every eight spaces for parking areas greater than 650 SF and less than 200 spaces. The proposed parking area is 83 spaces, requiring 11 trees to be planted. The applicant has proposed planting 11 trees along the parking area, spaced greater than 8 ft apart.

ADA Parking

Section 4.155 (.03) C.

A26. 83 parking spaces, with 79 standard spaces and 4 ADA spaces, are provided, meeting the one ADA space per 50 space standard.

Minimum and Maximum Parking

Section 4.155 (.03) G.

A27. As the subject property has been partitioned from the rest of the Parkway Woods industrial campus, the existing parking at the ESS site is not in compliance with current minimum parking standards with 162 parking spaces for employees. The intent of this project is to provide more parking for employees and meet minimum parking standards. The 205,100 sf building is divided into two uses with 145,694 sf functioning as a manufacturing warehouse and the remaining 59,406 sf as a storage warehouse. According to the Development Code a manufacturing warehouse requires 1.6 parking spaces per 1000 sf while a storage warehouse use requires .3 parking spaces per 1000 sf. The parking

minimum for the site based on the uses is 251 parking spaces. The addition of 83 parking spaces as well as the restoration of 18 spaces will increase the total parking spaces to 263, exceeding the parking minimum for the site.

Other Parking Design Standards
Subsections 4.155 (.02) and (.03)

A28. The applicable standards are met as follows:

Standard	Met	Explanation
Subsection 4.155 (.02) General Standards		
K. Surfaced with asphalt, concrete or other approved material.	<input checked="" type="checkbox"/>	All parking and driving areas are surfaced in asphalt, the loading dock area is surfaced with concrete.
Drainage meeting City standards	<input checked="" type="checkbox"/>	Drainage of the parking area and at grade door is professionally designed and being reviewed to meet City standards.
L. Lighting that does not shine into adjoining structures or into the eyes of passersby.	<input checked="" type="checkbox"/>	No lighting is proposed. Existing lighting will be used for parking area.
Subsection 4.155 (.03) Minimum and Maximum Off-Street Parking Requirements		
A. Access and maneuvering areas adequate.	<input checked="" type="checkbox"/>	Access and maneuvering area is adequate to serve functional needs of site.
A.1. Circulation patterns clearly marked.	<input checked="" type="checkbox"/>	Truck circulation will occur near the parking area and is not clearly marked on the plans. A condition of approval will require the submission of a Circulation Plan prior to issuance of construction permits

Other Development Standards

Access, Ingress, and Egress
Section 4.167

A29. No changes to access are proposed.

Natural Features and Other Resources
Section 4.171

A30. A small portion of the property is protected by the City’s Significant Resource Overlay Zone (SROZ). The portions located within the SROZ are on north and east side of the property. The proposed 83 parking spaces are located to the south of the SROZ. No changes to the SROZ or construction within the SROZ are proposed and no impact to the SROZ is expected. Tree protection fencing will separate the construction activity from the SROZ protecting the vegetation and slope.

An overhead powerline runs along the northern portion of the property and caution will need to be taken when construction activities occur in this area. There are no high voltage powerline easements or rights of way or petroleum pipeline easements on the site.

Public Safety and Crime Prevention

Design for Public Safety, Surveillance and Access

Subsection 4.175 (.01)

A31. Parking and loading has been designed to allow access for emergency services.

Lighting to Discourage Crime

Subsection 4.175 (.04)

A32. Lighting will be provided to illuminate the new parking.

Landscaping Standards

Landscaping Standards Purpose

Subsection 4.176 (.01)

A33. Through complying with the various landscape standards in Section 4.176 the applicant has demonstrated the improvements are in compliance with the landscaping and screening purpose statement.

Landscape Code Compliance

Subsection 4.176 (.02) B.

A34. No waivers or variances to landscape standards have been requested, thus all landscaping and screening must comply with the standards of this section.

Intent and Required Materials

Subsections 4.176 (.02) C. through I.

A35. As shown on Sheets C4.00 (Exhibit B2), materials required to meet landscaping standards are provided. The screening and buffering of the parking area from the Public Right of Way will be accomplished through a combination of the proposed landscaping and dense existing vegetation along the northern property line. A condition of approval will require the applicant to provide a complete list of shrub and groundcover species to be planted in the storm water swales prior to issuance of construction permits.

Landscape Area and Locations

Subsection 4.176 (.03)

A36. Eleven trees will be planted along the parking area meeting the requirement of providing one tree for every eight parking spaces. At least 10% of the parking area will be landscaped meeting the requirements of this standard. Proposed materials achieve a balance between various plant forms, textures, and heights, and native plant materials are used where practicable.

Buffering and Screening

Subsection 4.176 (.04) A. through F.

A37. Buffering and screening is provided as follows:

- **Pursuant to Standard A** (screening between intensive and less intensive developments), the proposed development is not adjacent to less intensive developments.
- **Pursuant to Standard B** (buffering and screening of activity areas on commercial and industrial sites from adjacent residential areas), the proposed development is not adjacent to residential developments.
- **Pursuant to Standard C** (mechanical and utility equipment screening), all exterior, roof and ground mounted, mechanical and utility equipment must be screened from ground level off-site view from adjacent streets or properties. No roof or ground-mounted mechanical equipment is shown on the submitted plans.
- **Pursuant to Standard D** (screening of outdoor storage areas) no outdoor storage is proposed.
- **Pursuant to Standard E** (screening of loading areas and truck parking not in industrial zones), the proposed development is an industrial use in the PDI zone and, therefore, is not required to screen loading areas and docks, and truck parking.
- **Pursuant to Standard F** (fences over six (6) feet high), no fence over six (6) feet high is proposed on the project site.

Landscape Plan Requirements

Subsection 4.176 (.09)

A38. The Landscape Plans provide the required information including proposed landscape areas, type, installation size, number and placement of materials, plant material list, and proposed method of irrigation. A condition of approval will require the applicant to provide a complete list of shrub and groundcover species to be planted in the storm water swales prior to issuance of construction permits.

Other Development Standards

Access Drives and Travel Lanes

Subsection 4.177 (.01) E.

A39. No changes to the access drives and travel lanes are proposed.

Outdoor Lighting

Sections 4.199.20 through 4.199.60

A40. The proposed parking lot is designed around the existing outdoor lighting; therefore the requirements of this section do not apply.

Underground Installation

Sections 4.300 through 4.320

A41. No changes to utilities are proposed.

Request B: Site Design Review (SDR22-0008)

As described in the Findings below, the request meets the applicable criteria or will by Conditions of Approval.

Site Design Review

Excessive Uniformity, Inappropriate Design
Subsection 4.400 (.01) and Subsection 4.421 (.03)

B1. Staff summarizes compliance with this subsection as follows:

- **Excessive Uniformity:** The proposed development is unique to the particular development context and does not create excessive uniformity.
- **Inappropriate or Poor Design of the Exterior Appearance of Structures:** This standard does not apply as no new buildings or structures are proposed on the site.
- **Inappropriate or Poor Design of Signs:** This standard does not apply as no signs are proposed on the site.
- **Lack of Proper Attention to Site Development:** The appropriate professional services have been used to design the site, demonstrating attention being given to site development.
- **Lack of Proper Attention to Landscaping:** Landscaping is provided, has been professionally designed by a landscape designer, and includes a variety of plant materials, all demonstrating appropriate attention being given to landscaping.

Purposes and Objectives

Subsection 4.400 (.02) and Subsection 4.421 (.03)

B2. The applicant has provided sufficient information demonstrating compliance with the objectives of this subsection as follows:

- **Pursuant to Objective A** (assure proper functioning of the site and high quality visual environment), the proposed site layout allows for landscaping requirements to be met on the site and creates a visual environment that is compatible with other surrounding industrial uses. The additional parking and modifications to the loading dock will ensure the site continues to function for the existing use and improve current deficiencies.
- **Pursuant to Objective B** (encourage originality, flexibility, and innovation), landscaping is designed according to parking standards and incorporates the storm water facilities in the design.
- **Pursuant to Objective C** (discourage inharmonious development), professional design of the proposed landscaping supports a quality visual environment and thus prevents monotonous, drab, unsightly, and dreary development.
- **Pursuant to Objective D** (conserve natural beauty and visual character), design of the proposed site layout addresses the public at the street. The natural area within the

SROZ will not be impacted, preserving the vegetation and natural resources. Landscaping improves the general aesthetic of the site and harmonizes with the visual character of the PDI zone.

- **Pursuant to Objective E** (protect and enhance City's appeal), development of the site with well-designed landscaping will enhance this industrial area, which could attract additional investment in surrounding properties.
- **Pursuant to Objective F** (stabilize property values/prevent blight), improving the parking will allow the site to continue to function as the current business expands.
- **Pursuant to Objective G** (insure adequate public facilities), the proposal does not impact the availability of orderly, efficient and economic provision of public services and facilities, which are available and adequate for the subject property.
- **Pursuant to Objective H** (achieve pleasing environments and behavior), landscaping and the existing vegetation on the northern property line provide separation and screening to the areas adjacent to the project.
- **Pursuant to Objective I** (foster civic pride and community spirit), the project will foster civic pride by improving the parking allowing for a larger workforce bringing economic opportunity to the City.
- **Pursuant to Objective J** (sustain favorable environment for residents), the project has been designed to protect the peace, health and welfare of the City.

Development Review Board Jurisdiction Section 4.420

- B3.** A Condition of Approval will ensure construction, site development, and landscaping are carried out in substantial accordance with the DRB-approved plans, drawings, sketches, and other documents. No building permits will be granted prior to Development Review Board approval. No variances are requested from site development requirements.

Design Standards Subsection 4.421 (.01)

- B4.** The applicant has provided sufficient information demonstrating compliance with the standards of this subsection as follows:
- **Pursuant to Standard A** (Preservation of Landscape), there are minimal changes or impact to natural features on the site. No trees are proposed for removal and the SROZ will remain protected. Attention will be paid to grade and soil changes during construction.
 - **Pursuant to Standard B** (Relation of Proposed Buildings to Environment), no buildings or structures are proposed for this project.
 - **Pursuant to Standard C** (Drives, Parking, and Circulation), vehicle traffic and pedestrian traffic from the parking area will be kept separate using crosswalks creating access to the northern entrance of the building. No changes to drives or circulation are proposed.
 - **Pursuant to Standard D** (Surface Water Drainage), required stormwater facilities are proposed and no adverse impacts to surface water drainage are expected to result from

the proposal. Special attention has been paid to the loading dock area in regards to storm water. Conditions of approval will ensure that changes to the loading dock will adequately address stormwater on site.

- **Pursuant to Standard E** (Utility Service), no above ground utility installations are proposed. Stormwater and sanitary sewage disposal facilities are indicated on the applicant's plan set.
- **Pursuant to Standard F** (Advertising Features), no signs are proposed as part of the current application; therefore, this standard does not apply.
- **Pursuant to Standard G** (Special Features), no special features are proposed for this project.

Applicability of Design Standards

Subsection 4.421 (.02)

B5. Design standards have been applied to all buildings, structures, and other site features.

Conditions of Approval

Subsection 4.421 (.05)

B6. Planning and Engineering have recommended conditions of approval to ensure the proper and efficient functioning of the development.

Color or Materials Requirements

Subsection 4.421 (.06)

B7. No new buildings or structures are proposed; therefore, this standard does not apply.

Site Design Review Submission Requirements

Submission Requirements

Section 4.440

B8. The applicant has submitted materials in addition to requirements of Section 4.035, as applicable.

Time Limit on Site Design Review Approvals

Time Limit on Approval

Section 4.442

B9. The applicant has indicated that they will pursue development within two (2) years of receiving approval. It is understood that the approval will expire after two (2) years if a building permit has not been issued, unless an extension has been granted by the Development Review Board.

Installation of Landscaping

Landscape Installation or Bonding

Subsection 4.450 (.01)

B10. A Condition of Approval will assure installation or appropriate security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director, is filed with the City assuring such installation within six (6) months of occupancy.

Approved Landscape Plan
Subsection 4.450 (.02)

B11. Action by the City approving a proposed landscape plan is binding on the applicant. A Condition of Approval will ensure that substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan will not be made without official action of the Planning Director or Development Review Board and provide ongoing assurance the criterion is met.

Landscape Maintenance and Watering
Subsection 4.450 (.03)

B12. A Condition of Approval will ensure landscaping is continually maintained in accordance with this subsection.

Modifications of Landscaping
Subsection 4.450 (.04)

B13. A Condition of Approval will provide ongoing assurance that this criterion is met by preventing modification or removal of landscaping without appropriate City review.

Natural Features and Other Resources

Protection
Section 4.171

B14. The proposed design provides for protection of natural features and other resources consistent with the purpose and objectives of site design review.

Landscaping Standards

Landscape Standards Code Compliance
Subsection 4.176 (.02) B.

B15. No waivers or variances to landscape standards have been requested, thus all landscaping and screening must comply with the standards of this section.

Intent and Required Materials
Subsections 4.176 (.02) C. through I.

B16. The minimum or higher standard has been applied throughout different landscape areas of the site and landscape materials are proposed to meet each standard in the different areas. Site Design Review is occurring concurrently with Modifications to the Stage 2 Final

Plan, which includes a thorough analysis of the functional application of the landscaping standards.

Landscape Area and Locations

Subsection 4.176 (.03)

B17. Landscaping is proposed throughout the parking area. Materials achieve a balance between various plant forms, textures, and heights, and native plant materials are used where practicable.

Buffering and Screening

Subsection 4.176 (.04)

B18. Consistent with the Modification to the Stage 2 Final Plan, adequate screening is proposed.

Sight-Obscuring Fence or Planting

Subsection 4.176 (.05)

B19. Site obscuring fencing and plantings are not proposed.

Shrubs and Groundcover Materials

Subsection 4.176 (.06) A.

B20. A Condition of Approval will require that the detailed requirements of this subsection are met.

Plant Materials-Trees

Subsection 4.176 (.06) B.

B21. A Condition of Approval will require all trees to be a minimum of 2-inch caliper, balled and burlapped (B&B), well-branched, and typical of their type as described in Current American Association of Nurserymen (AAN) Standards.

Types of Plant Species

Subsection 4.176 (.06) E.

B22. The applicant has provided sufficient information in their Landscape Plans showing the proposed landscape design meets the standards of this subsection.

Exceeding Plant Standards

Subsection 4.176 (.06) G.

B23. The selected landscape materials do not violate any height or vision clearance requirements.

Landscape Installation and Maintenance

Subsection 4.176 (.07)

B24. Conditions of Approval ensure that installation and maintenance standards are or will be met including that plant materials be installed to current industry standards and properly

staked to ensure survival, and that plants that die are required to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City. Notes on the applicant's Landscape Plan provide for an irrigation system.

Landscape Plans

Subsection 4.176 (.09)

B25. The applicant's submitted plans provide the required information identifies water usage area for site landscaping.

Completion of Landscaping

Subsection 4.176 (.10)

B26. The applicant has not requested to defer installation of plant materials.

Outdoor Lighting

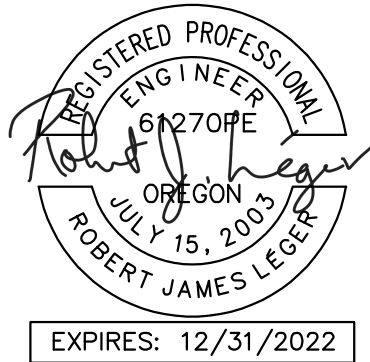
Applicability

Sections 4.199.20 and 4.199.60

B27. Per the applicant's code response narrative, no outdoor lighting is proposed with the current application.

Stormwater Calculations

ESS, Inc. - Site Updates
26440 SW Parkway Avenue
Wilsonville, OR 97070



DCI Job Number 21032-0041

December 15, 2022



City of Wilsonville
Exhibit B3 DB22-0008

Table of Contents

Section I: Site Background Information Page

- 1. Vicinity Map 1
- 2. Project Information 2
- 3. Stormwater Narrative..... 3 - 5
- 4. Stormwater Exhibit..... 6

Section II: Onsite Stormwater Design Information

- 1. WES BMP Sizing Tool Summary – West Swale..... 1
- 2. WES BMP Sizing Tool Summary – East Swale 2
- 3. Impervious Area Summary 3

Appendix

- A. Soil Survey and Hydrologic Classification..... A1 – A4
- B. Reference Stormwater Plan Sheets B1 – B8
- C. City of Wilsonville Stormwater Notes C1
- D. Operations and Maintenance Manual D1 – D30
- E. Geotechnical Infiltration Report E1 – E13



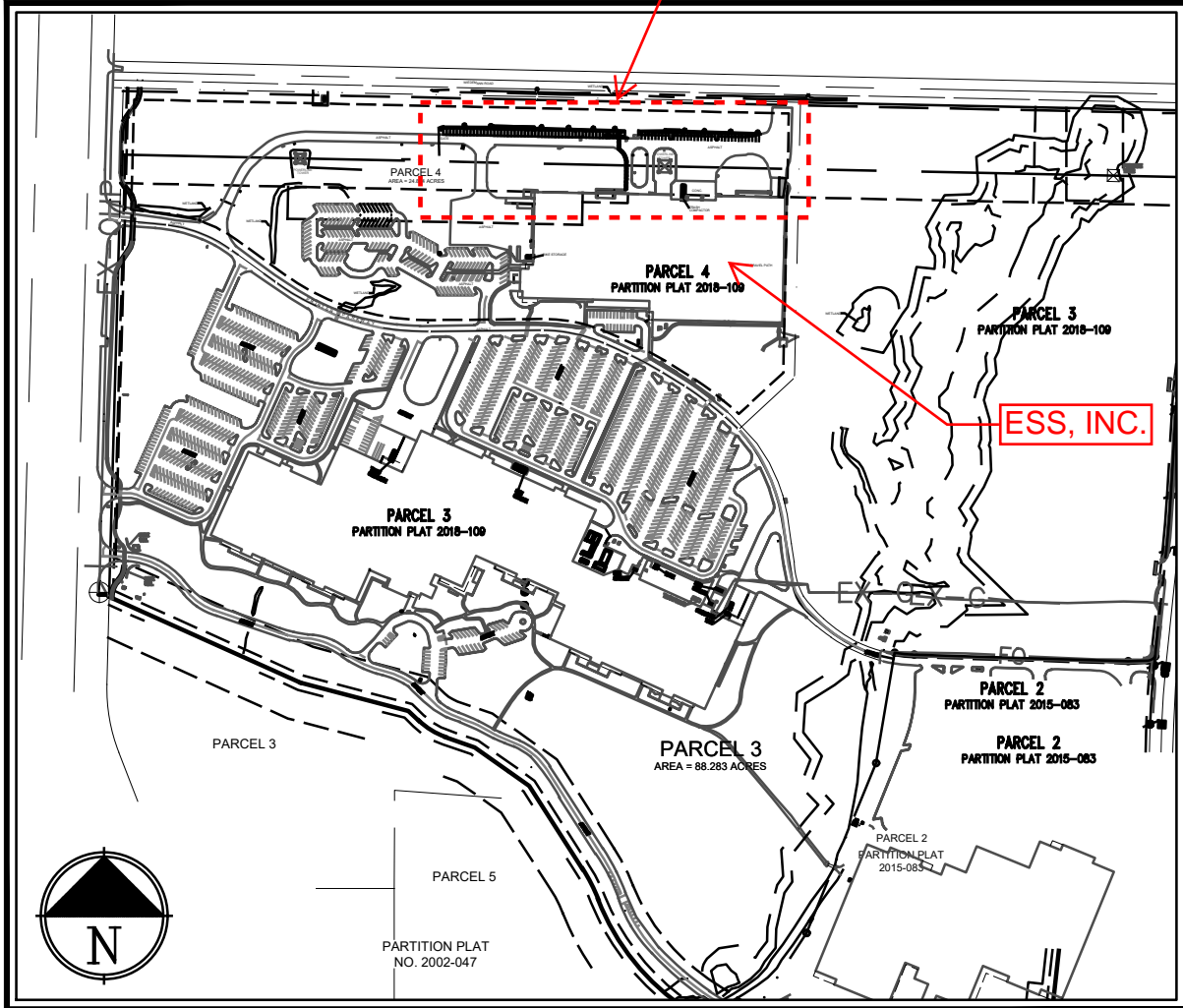
Section I: Site Background Information

1. Vicinity Map.....	1
2. Project Information	2
3. Stormwater Narrative.....	3 - 5
4. Stormwater Exhibit.....	6

SECTION I-1

Item 2.

AREA OF WORK



VICINITY MAP

Section I-2: Project Information

The ESS, Inc. site is located at 26440 SW Parkway Avenue in Wilsonville, Oregon and borders Printer Parkway to the south, SW Parkway Avenue to the west, undeveloped land to the east, and private development and undeveloped land to the north. This stormwater report contains information for the addition of a private onsite stormwater quality and quantity control system to support the new improvements.

The existing site conditions contain one large concrete tilt wall warehouse building with loading docks, parking areas, a stormwater conveyance system, and scattered trees. The new work includes the conversion of a dock-high loading dock to a drive-up ramp door, the addition of 80+ parking spaces, new asphalt paving, and stormwater swales for treatment and detention. Most of the onsite conditions will remain as-is.

Internal tenant improvement work is also planned, but the building footprint will remain the same.

The existing stormwater discharge for the site is to private underground onsite stormwater conveyance pipes. The new stormwater swales are located in the vicinity of two existing catch basins, which will be replaced and used as overflow structures for the stormwater swale after treatment and detention.

Impervious areas on site will be increased by approximately 10,755 sf. The loading dock will also be replaced with a ramp and the replacement area totals an additional 855 sf of impacted area. The swales are designed to treat and detain approximately 11,610 sf, which is a combination of both new and replaced impervious areas from the both the parking field and loading ramp. In addition, the proposed swales are designed to capture the surrounding existing pavement area that was historically draining to this grassed area prior to any construction.

All of the new impervious parking stall area will be directed north to be captured and treated in the proposed stormwater facilities (vegetated swales with underdrains and overflow catch basins) in the northeast corner of the property. The stormwater facilities for the new impervious area are designed to meet City of Wilsonville stormwater requirements. Since high groundwater and poor infiltration rates are expected, the sizing of the swales will exceed the BMP Sizing Tool results to meet the 10% recommendation in the Manual.

Section I-3: Stormwater Narrative

The proposed site improvements are designed to provide stormwater swales for stormwater water quality and quantity compliance. The WES BMP Sizing Tool was used for minimum swale sizing for the new and replaced impervious areas. No analysis or upgrades have been proposed to other existing areas of the site.

Site Area

Stormwater runoff from the proposed site improvements is designed to be captured and conveyed to the existing stormwater conveyance system. New stormwater swales have been sized to treat at least the new and replaced impervious areas of 11,610 sf. Areas included in the 11,610 sf total are the new parking area and the new ramp area.

The new ramp area does not connect to the treatment/detention swales north of the site due to historic flow directions and distance constraints. To offset the new ramp area, which is replacing existing concrete at a 1:1 ratio and adding 105 sf of new impervious area, the northern swales are designed to capture, treat, and meet source control requirements for an equivalent portion of existing asphalt area closer to the swale that was previously untreated or detained. The new ramp area is approximately 960 sf of replaced and new concrete area and the swale is proposing to capture an additional 960 sf of existing asphalt pavement area to account for the new ramp area being unable to reach the swale. The eastern swale is sized to capture, treat, and meet source control requirements for the new asphalt area being constructed, as well as an additional 960 sf of impervious area from the surrounding existing pavement.

The swales are located at the head of the new parking stalls at the northeast corner of the site. The swales will be a minimum of 8' wide to provide 1' of depth and a minimum 2' wide bottom area, with 3:1 side slopes. High groundwater and poor infiltration rates are present, and each swale is designed with an overflow catch basin and underdrain lines with a 1" orifice for required water quality and detention standards.

The WES BMP Sizing Tool was used for each swale to compute the minimum required square footage of each swale based on contributing impervious area. The western swale is receiving approximately 8,330 sf of new asphalt area for parking and the swale is providing 880 sf of treatment area, which is more than the required amount of 500 sf from the WES BMP Sizing Tool. The eastern swale is receiving approximately 3,280 sf of new asphalt area and existing asphalt area to offset the replaced loading dock area.

The eastern swale provides 328 sf of area, which is higher than the minimum required 196.8 sf from the WES BMP Sizing Tool. Both printouts of calculations can be found in section II-1 of this report. An area summary tabulation is in section II-2 of this report.

This site has high groundwater and low infiltration rates, so in addition to the WES BMP Sizing Tool, the swale has been designed to be sized per the manual to have at least 10% of the contributing impervious area, or 1,161 sf minimum. The design of the swale provides 1,208 sf, which exceeds the 10% threshold, and exceeds the WES BMP Sizing Tool required area.

Small conveyance swales on each side of the treatment swales will direct runoff from the new parking stalls to the treatment swales. These conveyance swales have not been designed to be considered as treatment or detention, but will provide benefits for both treatment and detention after growth has been established.

The annual storm events are anticipated to be contained within the swale. Higher level storm events, such as the 100-year event, are designed to be conveyed to the new oversized vegetated swale facility and connected conveyance swales. Runoff from higher level storm events are able to be detained in the volume of the swale.

The stormwater facilities are designed to be unlined with drainage rock to allow infiltration into the native soils. The hydrologic soil group is rated as C/D by the USGS Soil Survey, and infiltration rates are low. Group C was used as the area would be considered a "drained" area. The observed infiltration rate determined by the geotechnical investigation report is 0.9 in/hr at 2' below grade and 2.5 in/hr at 4' below grade.

Conveyance

The site has existing stormwater pipe laterals to the swale areas, which will be disconnected from the existing catch basins and re-connected to the overflow inlets. No new storm lines are anticipated to be created with this design. The existing site did not have a detention or treatment facility, so existing flows would generally be discharged quickly through catch basins. The proposed site provides volume through oversized detention and conveyance swales to help detain and treat the water prior to entering the existing stormwater system. The new ramp is maintaining historic flow rates to the adjacent catch basin.

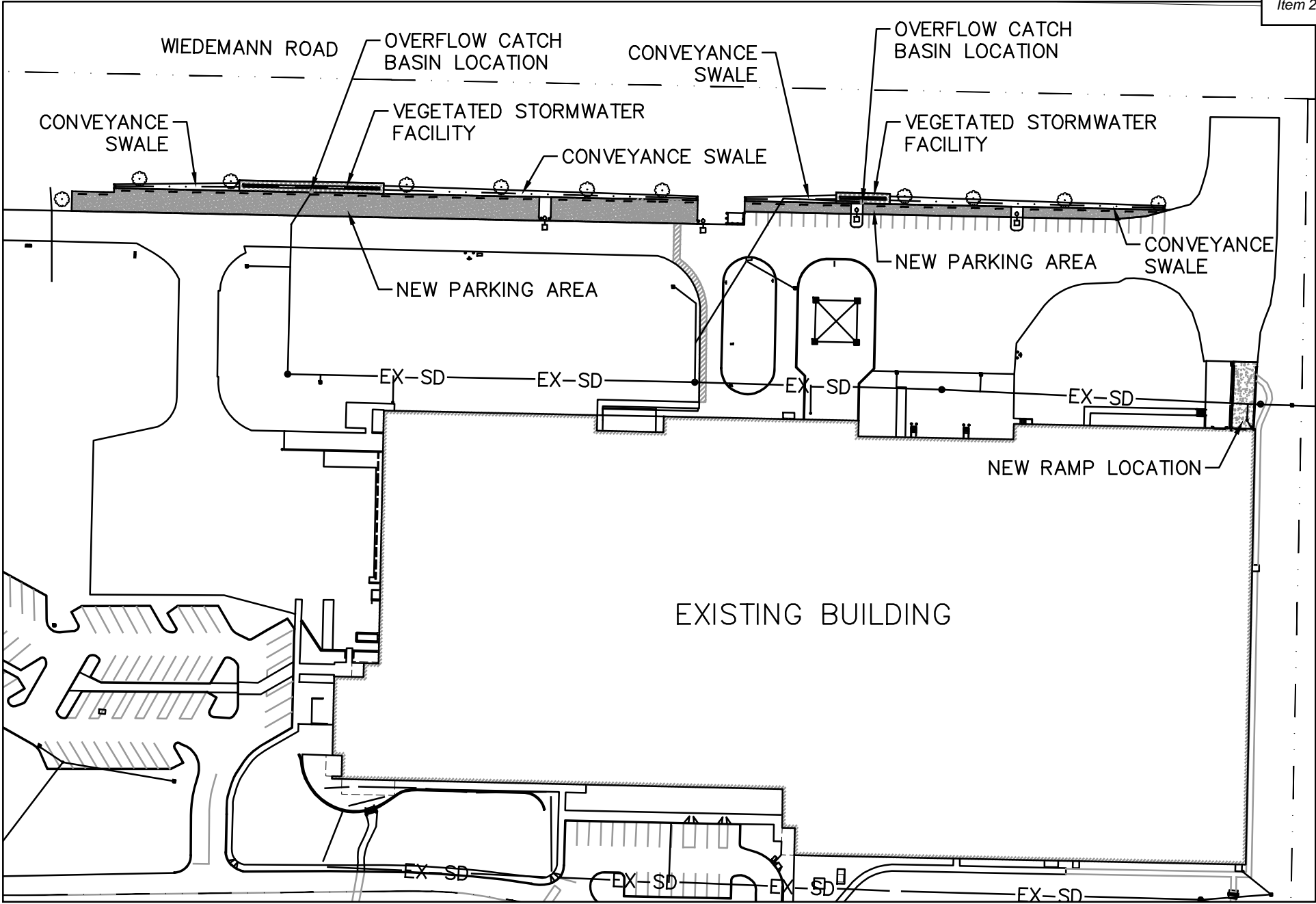
Stormwater Quality Control

The area provided for stormwater quality control was initially based on the BMP Sizing Tool, which was then increased to a higher value of 10% of the affected impervious area, per the Manual due to soil and groundwater conditions. This larger swale size will provide over 60% more square footage than the facility is required per the BMP method, as well as provide additional storage volume that will allow more stormwater to be treated and infiltrated, as opposed to leaving the area without treatment.

Stormwater Quantity Control (Detention)

The BMP Sizing Tool sized the facility for detention, and the swale area will be increased per the Manual due to the soil and groundwater conditions. This extra sizing factor will provide additional storage volume and lower outflow rates. The sizing factor used is 10% of the total new and disturbed impervious areas, which exceeds the design requirement from the WES BMP Sizing Tool.

ESS INC_STORMWATER_EXHIBIT_REPORT.DWG



STORMWATER FACILITIES MAP

SECTION 1-4
SCALE: 1"=100'





Section II: Onsite Stormwater Design Information

- 1. WES BMP Sizing Tool Summary – West Swale..... 1
- 2. WES BMP Sizing Tool Summary – East Swale 2
- 3. Impervious Area Summary 3

WES BMP Sizing Report

Project Information

Project Name	ESS, Inc. - Wilsonville
Project Type	Addition
Location	26440 SW Parkway Ave.
Stormwater Management Area	8330
Project Applicant	LRS Architects
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA-Added Parking	8,330	Grass	ConventionalConcrete	C	Vegetated Swale

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Vegetated Swale	FlowControlAndTreatment	Vegetated Swale - Filtration	C3	499.8	880.0	0.9

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Due to groundwater and poor infiltration rates, the swale is sized per the manual to be at least 10% of the contributing area (1,161 sf total).

The swale will be split into two separate facilities, sized appropriately for their contributing area.

WES BMP Sizing Report

Project Information

Project Name	ESS, Inc. - Wilsonville
Project Type	Addition
Location	26440 SW Parkway Ave.
Stormwater Management Area	3280
Project Applicant	LRS Architects
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
DMA-Added Parking	3,280	Grass	ConventionalConcrete	C	Vegetated Swale

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Vegetated Swale	FlowControlAndTreatment	Vegetated Swale - Filtration	C3	196.8	328.0	0.5

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Due to groundwater and poor infiltration rates, the swale is sized per the manual to be at least 10% of the contributing area (1,161 sf total).

The swale will be split into two separate facilities, sized appropriately for their contributing area.

Section II-2: Impervious Area Summary

Impervious Area Table:

Basin	Area (sf)
New Pavement Area (West Parking)	8,330
New Pavement Area (East Parking)	2,320
New and Replaced Pavement Area (Dock)	960
Total Disturbed Impervious Area	11,610

There are two swales on site: a west swale and an east swale. The west swale captures, treats, and provides runoff control for the new pavement area for the west parking. The east swale captures, treats, and provides runoff control for the new pavement area for the east parking, as well as additional existing asphalt area to offset the replaced dock area.

Swale Summary Table:

Basin	Contributing Imp. Area (sf)	Swale Area Provided (sf)	Swale Area Required (sf)
West Swale	8,330	880	499.8
East Swale	3,280	328	196.8

For this site, the soils are low draining and there is high groundwater present. Due to this, the swales are designed to be at least 10% of the disturbed impervious area.

10% x Total Disturbed Impervious Area = Minimum swale size

0.10 x 11,610 sf = 1,161 sf minimum

The total design area of the swale is 1,208 sf, therefore it satisfies the 10% impervious area requirement.

In addition, the proposed 1,208 sf swale exceeds the WES BMP Sizing Tool estimate of minimum area for both the western and eastern swales. The proposed swales provide approximately 2x the amount of required area from the WES BMP sizing tool.



Appendix

- A. Soil Survey and Hydrologic Classification..... A1 – A4
- B. Reference Stormwater Plan Sheets B1 – B8
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- E. Geotechnical Infiltration Report E1 – E13



Appendix A

Soil Survey and Hydrologic Classification

Hydrologic Soil Group—Clackamas County Area, Oregon
(ESS, Inc.)



Soil Map may not be valid at this scale.

Map Scale: 1:1,880 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84











MAP LEGEND









Area of Interest (AOI)
 Area of Interest (AOI)

Soils





Soil Rating Polygons








-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points

-  A
-  A/D
-  B
-  B/D

- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clackamas County Area, Oregon
 Survey Area Data: Version 18, Oct 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 16, 2021—Apr 18, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1A	Aloha silt loam, 0 to 3 percent slopes	C/D	8.6	77.4%
2225A	Huberly silt loam, 0 to 3 percent slopes	C/D	2.5	22.6%
Totals for Area of Interest			11.1	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

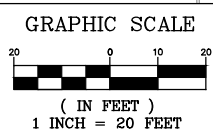
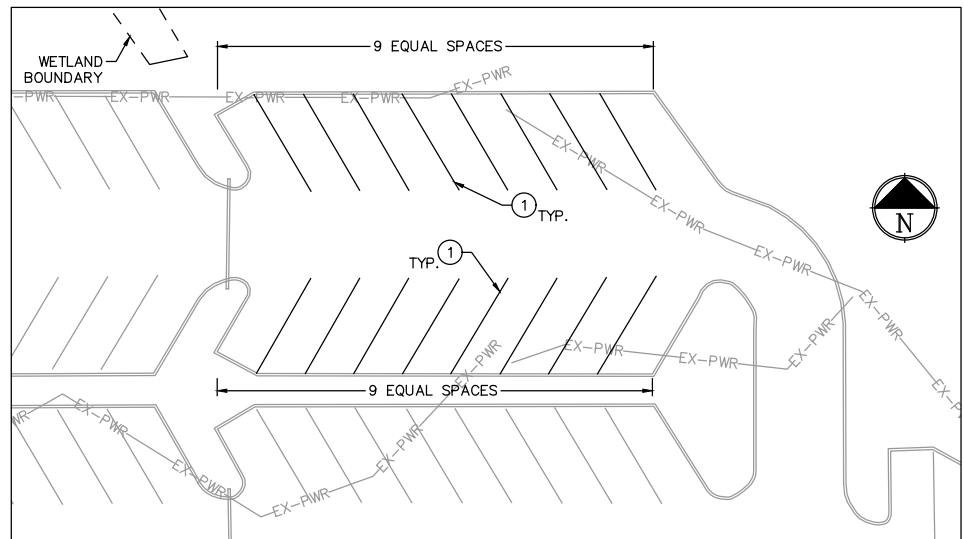
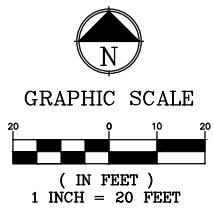
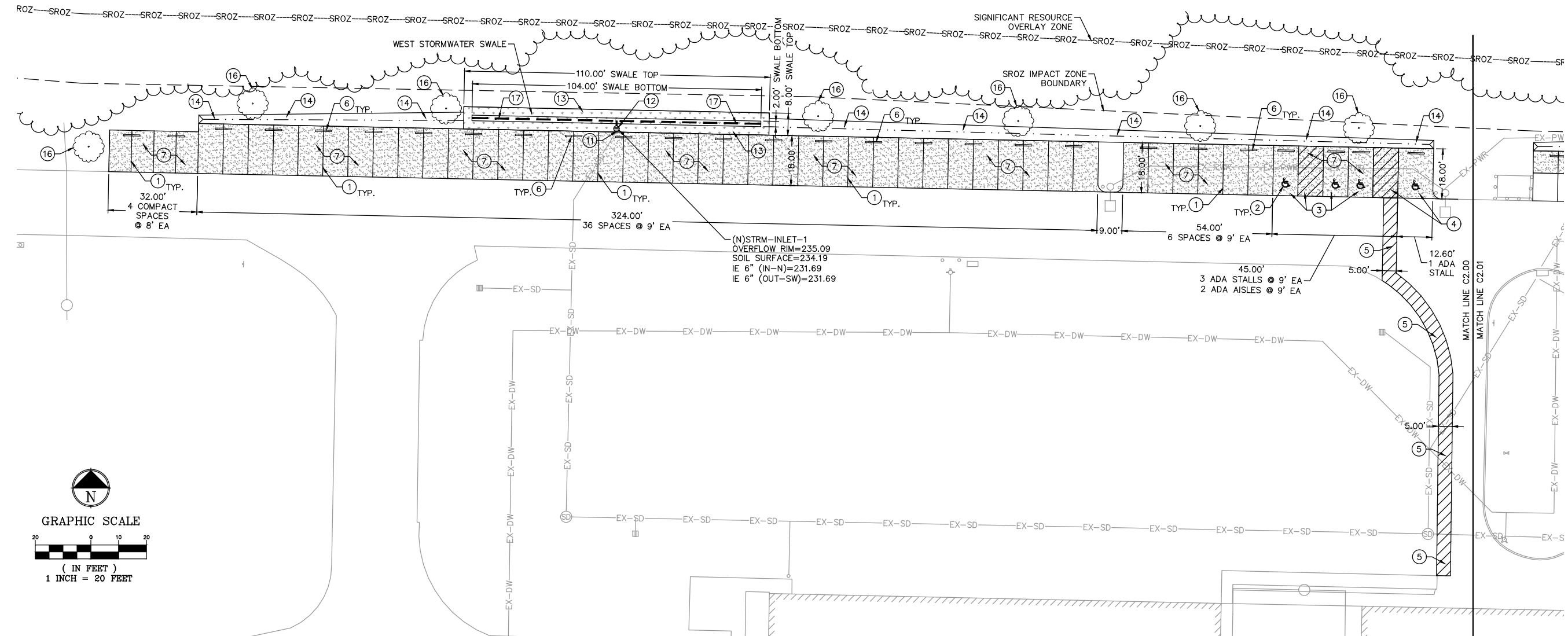
Tie-break Rule: Higher



Appendix B

Reference Stormwater Plan Sheets

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 File Location: O:\03020-PortlandDCI-Civil\2021\121032-0041 ESS incl-DRAWINGS-SHEETS\1032-0041_LAYOUT-STRM-IN-PLAN.dwg
 Plot Date: 2022-12-14
 D'Amato Connersano Inc. disclaims any responsibility for its unauthorized use.



SITE LAYOUT AND STORMWATER GENERAL NOTES:

1. TRAFFIC CONTROL FOR THE SITE SHALL FOLLOW THE PROVISIONS IN THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. SIDEWALK CROSS SLOPES SHALL BE 1.5% MAXIMUM TOWARDS THE PARKING FIELD, WHERE APPLICABLE.
3. REFER TO LANDSCAPING NOTES ON SHEET C4.00 FOR LANDSCAPE REQUIREMENTS.
4. ALL DRAINAGE AND UTILITY STRUCTURES SHALL BE INSTALLED SO THAT RIM ELEVATIONS CAN BE ADJUSTED TO MATCH FINISHED GRADE.
5. SWALE DIMENSIONS SHOWN ARE TO BOTTOM OF SWALE, UNLESS INDICATED OTHERWISE.
6. IN AREAS WHERE STORMWATER LINES ARE LESS THAN 36", THE STORMWATER LINE SHALL BE COMPRISED OF DUCTILE IRON, CLASS-51 CEMENT LINED PIPE (DI CL-51).

LEGEND

- NEW ASPHALT CONCRETE PAVEMENT AREA
- NEW PORTLAND CEMENT CONCRETE AREA
- NEW VEGETATED SWALE AREA

ⓧ SITE LAYOUT AND STORMWATER KEYNOTES:

1. PAINT NEW 4" WIDE, WHITE STRIPE.
2. PAINT NEW ADA WHEELCHAIR SYMBOL. SEE DETAIL 1/C5.00.
3. CONSTRUCT NEW ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
4. CONSTRUCT NEW VAN-ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
5. PAINT NEW ACCESSIBLE PATH. STRIPING SHALL BE COMPRISED OF 4" WIDE, WHITE STRIPES AT A 45° ANGLE, SPACED 2' ON CENTER, WITH 4" WIDE, WHITE CONTINUOUS STRIPING ALONG EDGES. PATH SHALL BE 5' WIDE.
6. INSTALL CONCRETE WHEELSTOP, 5' LONG, 8" WIDE. CENTER BETWEEN SPACES AND SECURE TO PAVEMENT.
7. CONSTRUCT ASPHALT CONCRETE PAVEMENT SECTION. SEE DETAIL 3/C5.00 AND CITY OF WILSONVILLE DRAWING NUMBER RD-1170/C5.00.
8. CONSTRUCT NEW THICKENED PORTLAND CEMENT CONCRETE PAVEMENT SECTION. SEE DETAIL 2/C5.00.
9. CONSTRUCT NEW RAMP PER GRADING DETAILS ON SHEET C3.10.
10. CONSTRUCT NEW STRUCTURAL WALL AND GUARDRAIL ALONG RAMP PER DETAIL 1/C5.01.
11. CONNECT EXISTING STORMWATER LINES TO THE NEW CATCH BASIN USING APPROVED PREMANUFACTURED FITTINGS.
12. CONSTRUCT NEW 24" DIAMETER NYLOPLAST OVERFLOW INLET WITH GRATE PER CITY OF WILSONVILLE DRAWING NUMBER S-2112/C5.00. 6" UNDERDRAIN PIPES SHALL CONNECT TO THE NEW BASIN WITH REMOVABLE CAPS WITH 1" DRILLED ORIFICES.
13. CONSTRUCT UNLINED STORMWATER SWALE PER CITY OF WILSONVILLE DRAWING NUMBER ST-6045/C5.01. SIDE SLOPES SHALL BE 3H:1V, MAXIMUM. AREAS WITHIN SWALE BASINS SHALL BE PROTECTED FROM USE AS CONSTRUCTION STORAGE AREAS AND OVER-COMPACTION BY EQUIPMENT THROUGHOUT THE CONSTRUCTION PERIOD.
14. CONSTRUCT STORMWATER CHANNEL FOR RUNOFF PER GRADING PLANS C3.00 AND C3.01. SEE CROSS SECTION DETAIL, SHEET C3.10.
15. ADJUST EXISTING STORMWATER CLEANOUT RIM IN NEW RAMP TO FINISH GRADE.
16. INSTALL NEW TREE PER CITY OF WILSONVILLE DRAWING NUMBER P-5000/C5.01. TREE SHALL BE 1" CALIPER MINIMUM TILIA CORDATA, LITTLELEAF LINDEN.
17. CONSTRUCT NEW 6" PERFORATED PVC UNDERDRAIN LINE BENEATH STORMWATER SWALE. CONNECT TO OVERFLOW INLET USING APPROVED FITTINGS. UNDERDRAIN SHALL BE EMBEDDED IN DRAIN ROCK SECTION, WITH INVERT ELEVATION BEING APPROXIMATELY 2.50' BELOW SOIL SURFACE.
18. EXTERIOR DOWNSPOUT LINE TO REMAIN. INSTALL CONCRETE FILLED BOLLARD OR OTHER PROTECTION.

Item 2.
PREPARED BY:
ENGINEERS
 921 SW WASHINGTON ST. • SUITE
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-
 WEBSITE: WWW.DCENGINEERS.COM
CIVIL / STRUCTURAL
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SIGNATURE:

EXPIRES: 12/31/2022

REVISIONS:

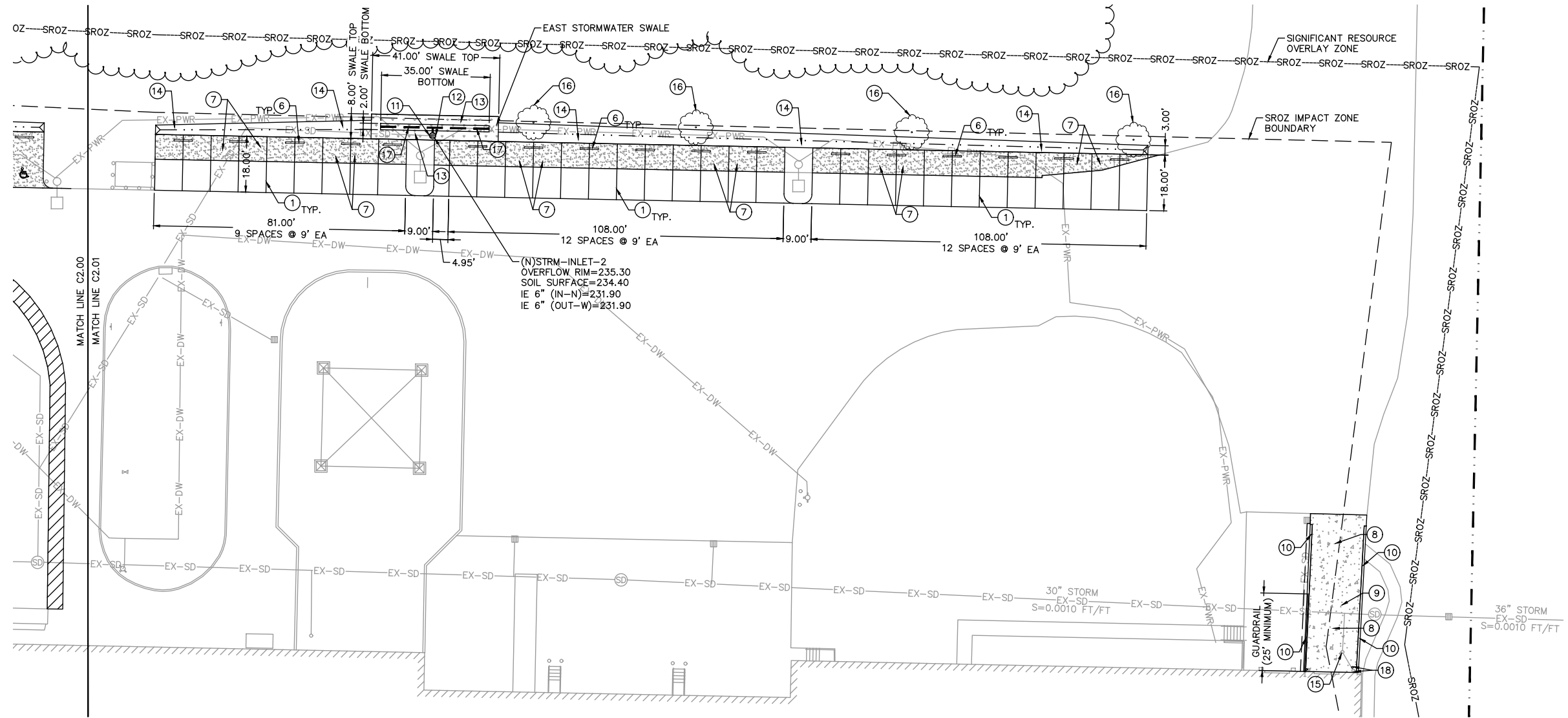
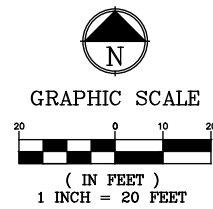
APPROVALS:

Job No.: 21032-0041
Proj. Manager: R.J.L.
Designed: K.L.E.
Reviewed: R.L.L.
Drawn: K.L.E.
Dwg. Checked: R.J.L.
Scale: AS SHOWN

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
SITE LAYOUT AND STORMWATER PLAN - WEST

SHEET NO.
C2.00 65



SITE LAYOUT AND STORMWATER GENERAL NOTES:

1. TRAFFIC CONTROL FOR THE SITE SHALL FOLLOW THE PROVISIONS IN THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. SIDEWALK CROSS SLOPES SHALL BE 1.5% MAXIMUM TOWARDS THE PARKING FIELD, WHERE APPLICABLE.
3. REFER TO LANDSCAPING NOTES ON SHEET C4.00 FOR LANDSCAPE REQUIREMENTS.
4. ALL DRAINAGE AND UTILITY STRUCTURES SHALL BE INSTALLED SO THAT RIM ELEVATIONS CAN BE ADJUSTED TO MATCH FINISHED GRADE.
5. SWALE DIMENSIONS SHOWN ARE TO BOTTOM OF SWALE, UNLESS INDICATED OTHERWISE.
6. IN AREAS WHERE STORMWATER LINES ARE LESS THAN 36", THE STORMWATER LINE SHALL BE COMPRISED OF DUCTILE IRON, CLASS-51 CEMENT LINED PIPE (DI CL-51).

LEGEND

- NEW ASPHALT CONCRETE PAVEMENT AREA
- NEW PORTLAND CEMENT CONCRETE AREA
- NEW VEGETATED SWALE AREA

(X) SITE LAYOUT AND STORMWATER KEYNOTES:

1. PAINT NEW 4" WIDE, WHITE STRIPE.
2. PAINT NEW ADA WHEELCHAIR SYMBOL. SEE DETAIL 1/C5.00.
3. CONSTRUCT NEW ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
4. CONSTRUCT NEW VAN-ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
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6. INSTALL CONCRETE WHEELSTOP, 5' LONG, 8" WIDE. CENTER BETWEEN SPACES AND SECURE TO PAVEMENT.
7. CONSTRUCT ASPHALT CONCRETE PAVEMENT SECTION. SEE DETAIL 3/C5.00 AND CITY OF WILSONVILLE DRAWING NUMBER RD-1170/C5.00.
8. CONSTRUCT NEW THICKENED PORTLAND CEMENT CONCRETE PAVEMENT SECTION. SEE DETAIL 2/C5.00.
9. CONSTRUCT NEW RAMP PER GRADING DETAILS ON SHEET C3.10.
10. CONSTRUCT NEW STRUCTURAL WALL AND GUARDRAIL ALONG RAMP PER DETAIL 1/C5.01.
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13. CONSTRUCT UNLINED STORMWATER SWALE PER CITY OF WILSONVILLE DRAWING NUMBER ST-6045/C5.01. SIDE SLOPES SHALL BE 3H:1V, MAXIMUM. AREAS WITHIN SWALE BASINS SHALL BE PROTECTED FROM USE AS CONSTRUCTION STORAGE AREAS AND OVER-COMPACTION BY EQUIPMENT THROUGHOUT THE CONSTRUCTION PERIOD.
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15. ADJUST EXISTING STORMWATER CLEANOUT RIM IN NEW RAMP TO FINISH GRADE.
16. INSTALL NEW TREE PER CITY OF WILSONVILLE DRAWING NUMBER P-5000/C5.01. TREE SHALL BE 1" CALIPER MINIMUM TILIA CORDATA, LITTLELEAF LINDEN.
17. CONSTRUCT NEW 6" PERFORATED PVC UNDERDRAIN LINE BENEATH STORMWATER SWALE. CONNECT TO OVERFLOW INLET USING APPROVED FITTINGS. UNDERDRAIN SHALL BE EMBEDDED IN DRAIN ROCK SECTION, WITH INVERT ELEVATION BEING APPROXIMATELY 2.50' BELOW SOIL SURFACE.
18. EXTERIOR DOWNSPOUT LINE TO REMAIN. INSTALL CONCRETE FILLED BOLLARD OR OTHER PROTECTION.

PREPARED BY: **EDCI ENGINEERS**
 921 SW WASHINGTON ST. • SUITE 100
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.EDCIENGINEERS.COM
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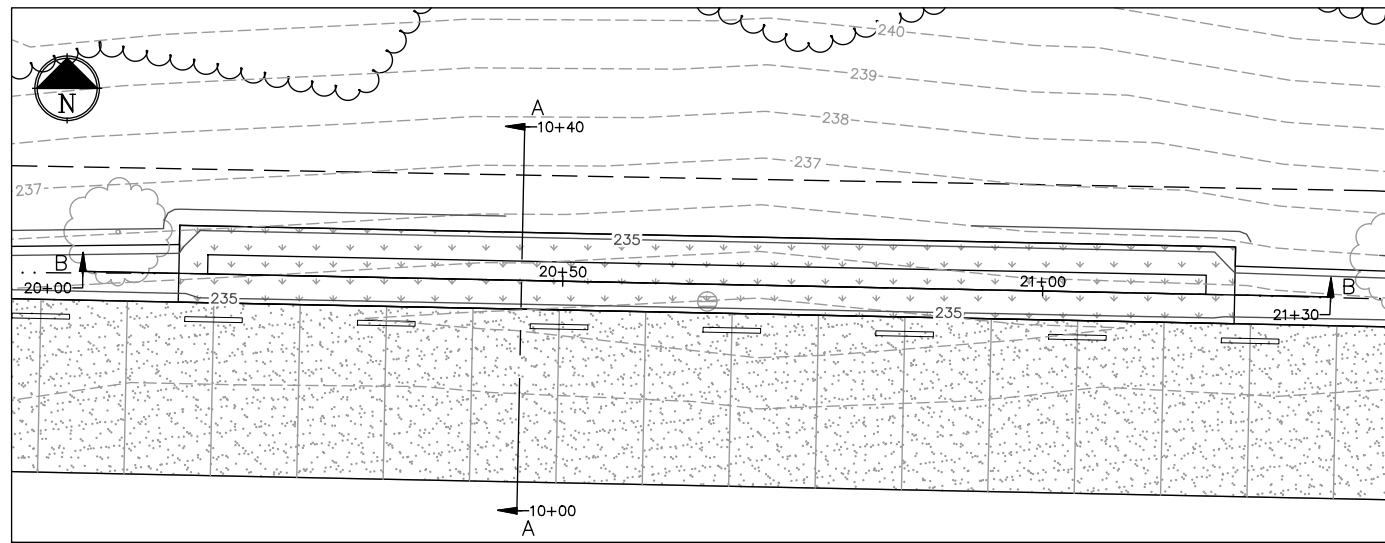
APPROVALS:

Job No.: 21032-0041
Proj. Manager: R.J.L.
Designed: K.L.E.
Reviewed: R.J.L.
Drawn: K.L.E.
Dwg. Checked: R.J.L.
Scale: AS SHOWN

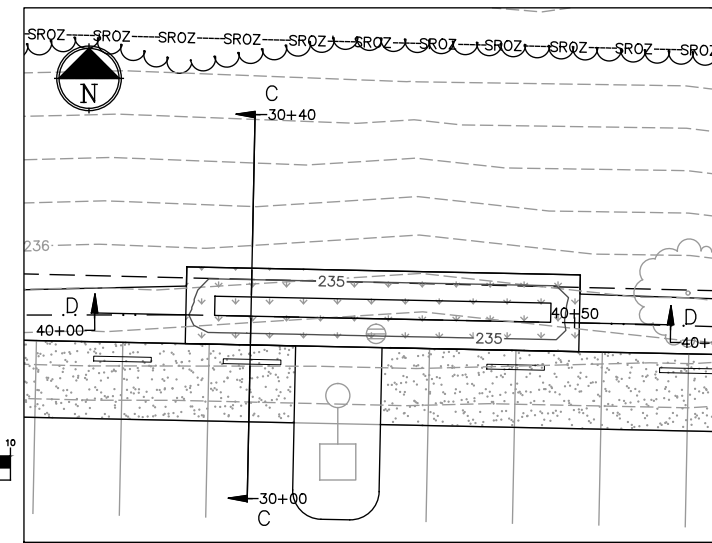
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SHEET TITLE: **SITE LAYOUT AND STORMWATER PLAN - EAST**

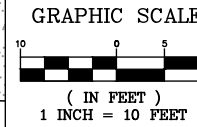
SHEET NO. **C2.01** of **66**



WEST SWALE - PLAN VIEW
 SCALE: 1"=10'

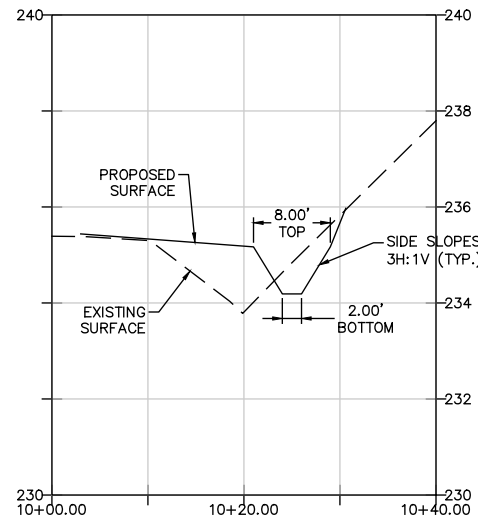


EAST SWALE - PLAN VIEW
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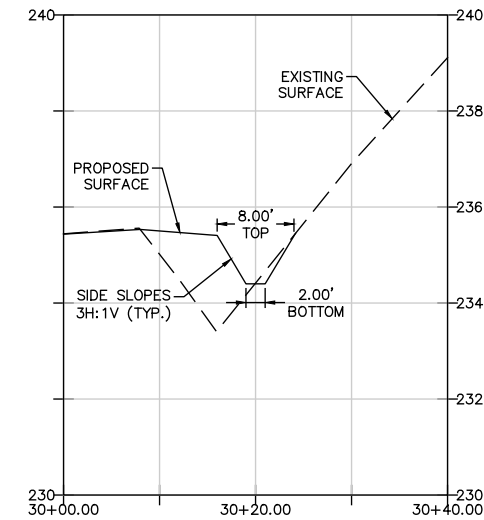


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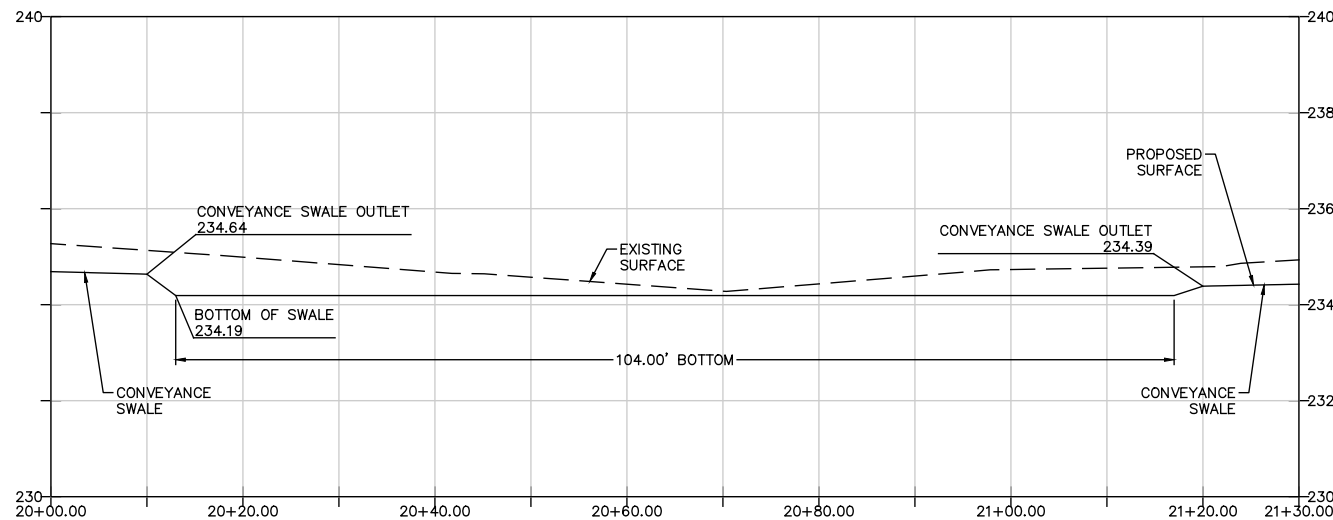
1. LANDSCAPING REQUIREMENTS PER CITY OF WILSONVILLE SECTION 3 - PUBLIC WORKS STANDARDS: STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS, 2015 ED.
2. THE WEST AND EAST SWALES ARE DESIGNATED "VEGETATED SWALE - FILTRATION" FACILITY TYPE, PER APPENDIX A OF THE STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS, SECTION A.2.06.
 - 2.1. PLANTING ZONES WITHIN THE WEST AND EAST SWALES ARE MOISTURE ZONE (A) ONLY.
3. SECTION A.3.00 PLANTING METHODS: PER PART B.3. (b), PLANT QUANTITIES FOR MOISTURE ZONE (A) ARE AS FOLLOWS, PER 100 SF OF FACILITY AREA:
 - 3.1. 3 LARGE SHRUBS/SMALL TREES
 - 3.2. 4 SMALL SHRUBS
 - 3.3. 115 GROUNDCOVER PLANTS
4. PLANTING QUANTITIES FOR WEST SWALE (SEE SWALE AREAS BELOW FOR REFERENCE):
 - 4.1. 27 LARGE SHRUBS
 - 4.2. 36 SMALL SHRUBS
 - 4.3. 1,012 GROUNDCOVER PLANTS
5. PLANTING QUANTITIES FOR EAST SWALE (SEE SWALE AREAS BELOW FOR REFERENCE):
 - 5.1. 10 LARGE SHRUBS
 - 5.2. 14 SMALL SHRUBS
 - 5.3. 378 GROUNDCOVER PLANTS
6. PLANT SPECIES:
 - 6.1. LARGE SHRUBS SHALL BE SPIREA DOUGLASII, DOUGLAS SPIRAEA.
 - 6.2. SMALL SHRUBS SHALL BE PHYSOCARPUS CAPITATUS, PACIFIC NINEBARK.
 - 6.3. GROUNDCOVER PLANTS SHALL BE CORNUS SERICEA 'KELSEYI', KELSEY DOGWOOD.
7. NOTE: SPECIES SUBSTITUTIONS ARE ALLOWED AND MUST BE SELECTED FROM APPENDIX A, TABLE A-2, OF THE STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS.
8. MINIMUM PLANT SIZES:
 - 8.1. LARGE SHRUBS: 30" HEIGHT
 - 8.2. SMALL SHRUBS/GROUNDCOVER: #1 CONTAINER
 - 8.3. HERBACEOUS PLANTS: SP #4 CONTAINER
9. CONVEYANCE SWALE LANDSCAPING SHALL BE GRASS (SEE OR SOD).



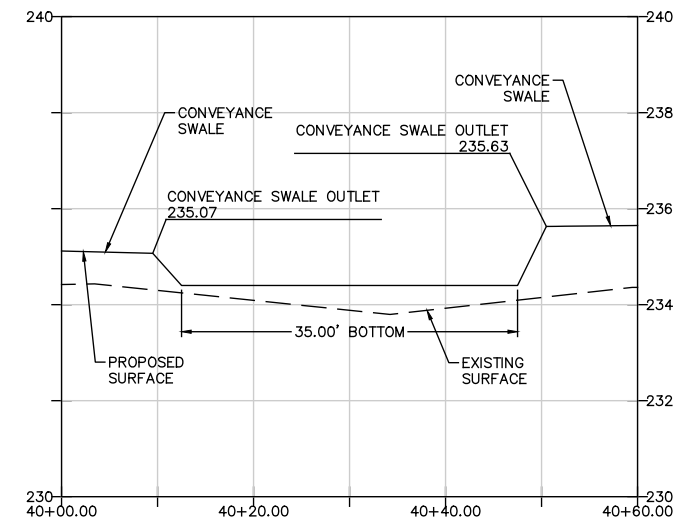
WEST SWALE - SECTION A-A
 SCALE: 1"=10' H
 1"=2' V



EAST SWALE - SECTION C-C
 SCALE: 1"=10' H
 1"=2' V



WEST SWALE - SECTION B-B
 SCALE: 1"=10' H
 1"=2' V



EAST SWALE - SECTION D-D
 SCALE: 1"=10' H
 1"=2' V

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 921 SW WASHINGTON ST. • SUITE 100
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.DDCIENGINEERS.COM
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SIGNATURE: **ROBERT JAMES STEEF**
 REGISTERED PROFESSIONAL ENGINEER
 OREGON
 JULY 15, 2003
 61270PE
 EXPIRES: 12/31/2022

REVISIONS:

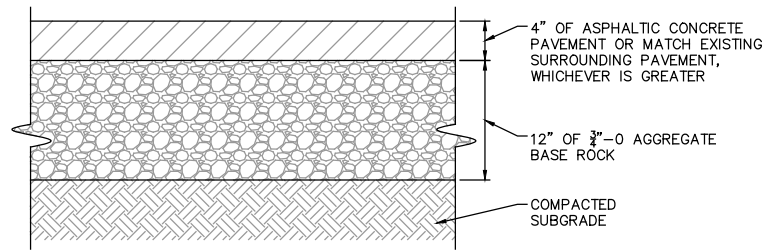
APPROVALS:

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Scale: AS SHOWN	

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
SWALE SECTIONS

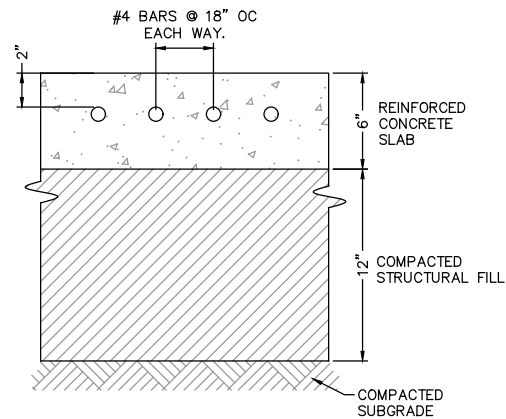
SHEET NO.
C4.00 67



- ASPHALT CONCRETE SHALL BE 1/2" LEVEL 2 WITH PG-64-22 ASPHALT BINDER. THE 6" ASPHALT CONCRETE SECTION SHALL BE PLACED IN (3) 2" LIFTS. THE ASPHALT CONCRETE PAVING MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 92% OF THE THEORETICAL MAXIMUM DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D2041 (RICE GRAVITY TEST).
- PAVEMENT BASE COURSE MATERIALS SHOULD CONSIST OF WELL-GRADED 3/4"-0 CRUSHED BASE ROCK HAVING LESS THAN 5% FINE MATERIALS PASSING THE NO. 200 SIEVE. THE BASE COURSE AND ASPHALT CONCRETE MATERIALS SHOULD CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE OREGON DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE BASE COURSE MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST).
- IF CONSTRUCTION OF THE IMPROVEMENTS IS PERFORMED DURING WET AND/OR INCLEMENT WEATHER CONDITIONS, THE AGGREGATE BASE ROCK SECTION SHALL BE INCREASED BY AT LEAST 6 INCHES.

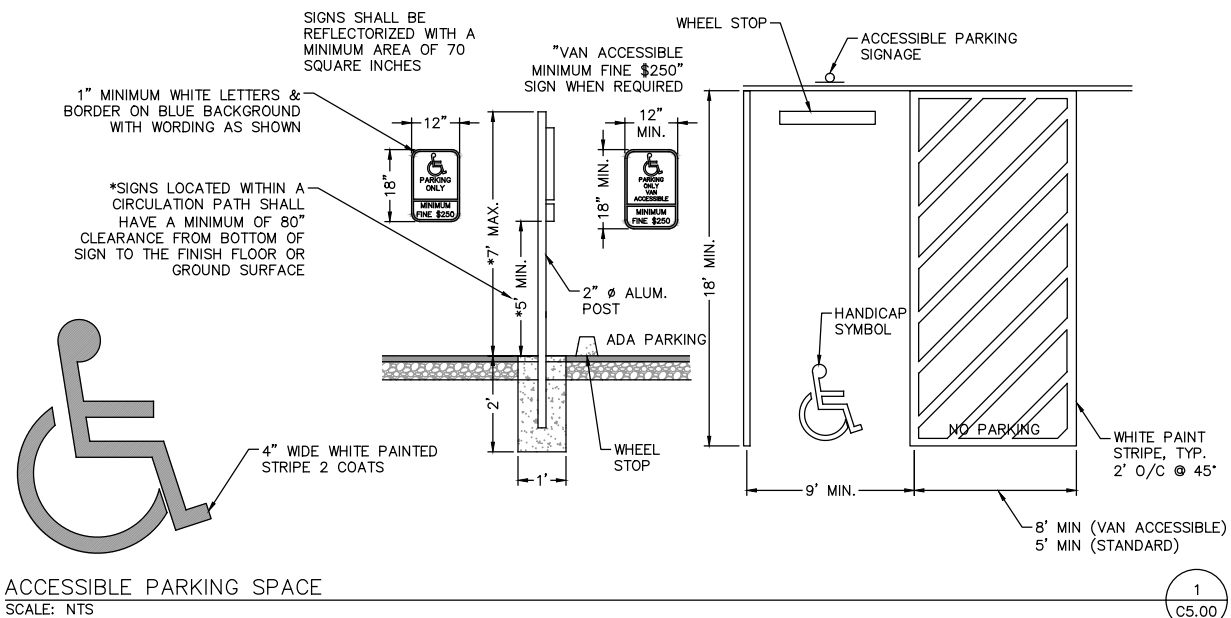
ASPHALT PAVEMENT SECTION DETAIL
SCALE: N.T.S.

3
C5.00



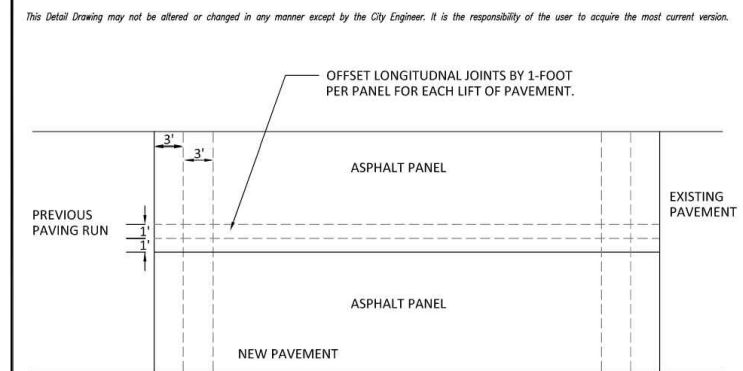
PCC CONCRETE PAVEMENT DETAIL
SCALE: N.T.S.

2
C5.00



ACCESSIBLE PARKING SPACE
SCALE: N.T.S.

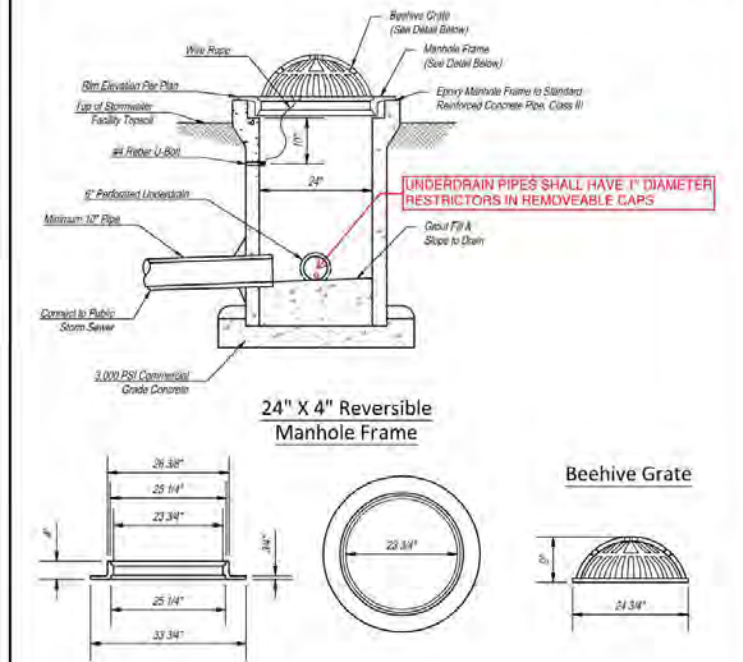
1
C5.00



NOTES:
PRIOR TO PLACING NEW PAVEMENT, ASPHALT COLD JOINTS SHALL BE SAWCUT TO A STRAIGHT LINE, CREATING A SMOOTH, SOUND EDGE FOR JOINING NEW PAVEMENT.

Asphalt Concrete Pavement Placement Detail		CITY OF WILSONVILLE
DRAWING NUMBER: RD-1170	DRAWN BY: SR	SCALE: N.T.S.
FILE NAME: RD-1170.DWG	APPROVED BY: NK	DATE: 4/2/14
		PUBLIC WORKS STANDARDS

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Bee Hive Inlet and Grate		CITY OF WILSONVILLE
DRAWING NUMBER: S-2112	DRAWN BY: SR	SCALE: N.T.S.
FILE NAME: S-2112.dwg	APPROVED BY: NK	DATE: 06/08/2017
		PUBLIC WORKS STANDARDS

Item 2.

PREPARED BY: **IEDCI ENGINEERS**

921 SW WASHINGTON ST. • SUITE 100
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.IEDCI-ENGINEERS.COM

CIVIL / STRUCTURAL

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SIGNATURE: **ROBERT JAMES STEER**

REGISTERED PROFESSIONAL ENGINEER
 OREGON
 JULY 15, 2003
 61270PE

EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

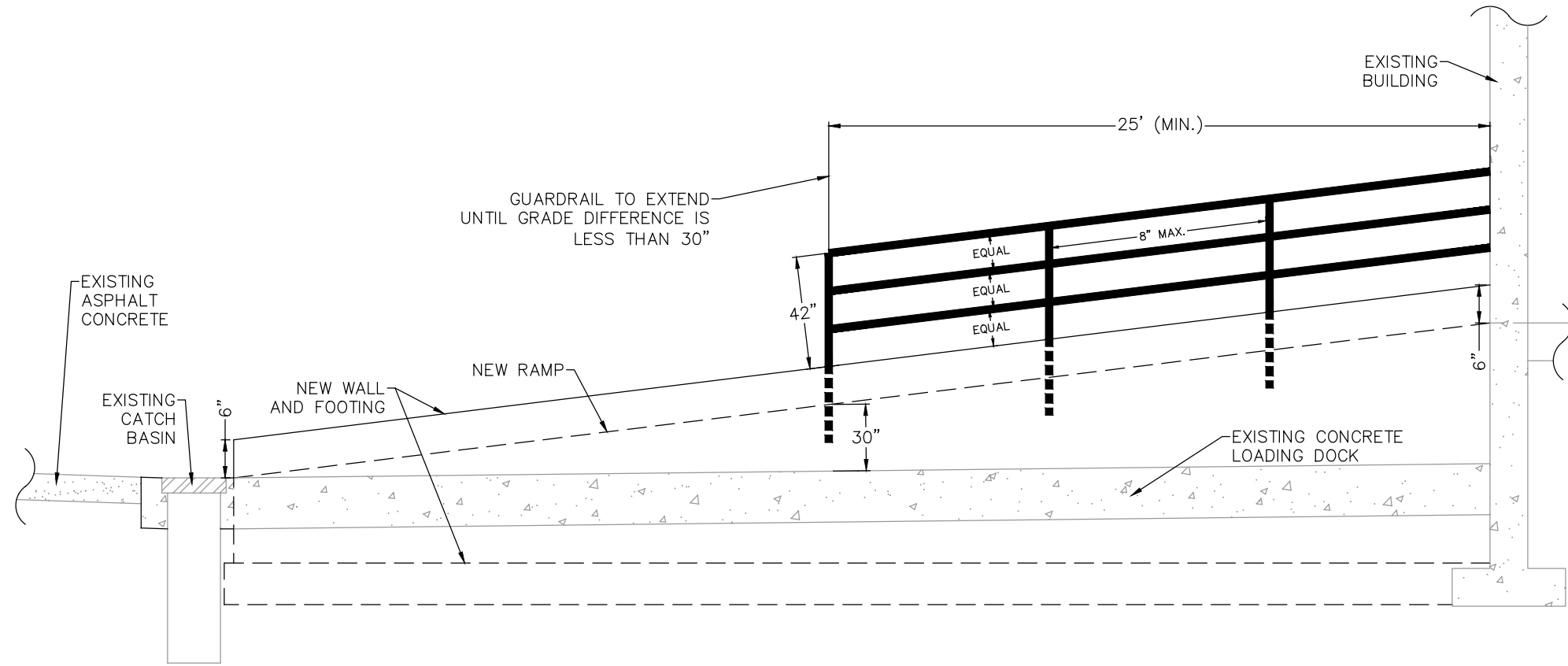
Job No.: 21032-0041
Proj. Manager: R.J.L.
Designed: K.L.E.
Reviewed: R.J.L.
Drawn: K.L.E.
Dwg. Checked: R.J.L.
Scale: AS SHOWN

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
CIVIL DETAILS

SHEET NO.
C5.00

68



GUARDRAIL DETAIL
SCALE: N.T.S.

2
C5.01

This Detail Drawing may not be altered or changed in any manner except by the City Engineer. It is the responsibility of the user to acquire the most current version.

DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

SEE TREE STAKING DETAIL FOR STAKING INSTRUCTIONS

MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE.

SET TOP OF ROOT BALL FLUSH TO GRADE OR 25-50 MM (1-2 IN.) HIGHER IN SLOWLY DRAINING SOILS.

MULCH RING 1800 MM (6 FT.) DIAM. MIN. 2400 MM (8 FT.) DIAM. PREFERRED

EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

200 MM (8 IN.)

100 MM (4 IN.) HIGH EARTH SAUCER BEYOND EDGE OF ROOT BALL

REMOVE ALL TWINE, ROPE AND WIRE AND BURIAL FROM TOP HALF OF ROOT BALL

IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN 200 MM (8 IN.) INTO PLANTING HOLE.

PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL

TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT. DO NOT TAMP OR STEP ON ROOT BALL

NOTE: FOR DIMENSIONS OF PLANTING AREAS, TYPES OF SOIL AMENDMENTS, OR SOIL REPLACEMENT, SEE "SOIL IMPROVEMENT DETAILS."

NOTE: WIDTH OF PLANTING HOLE IS 3 TIMES ROOT BALL DIAMETER IN HIGHLY COMPACTED SOIL; 2 TIMES THE ROOT BALL DIAMETER MINIMUM IN ALL OTHERS.

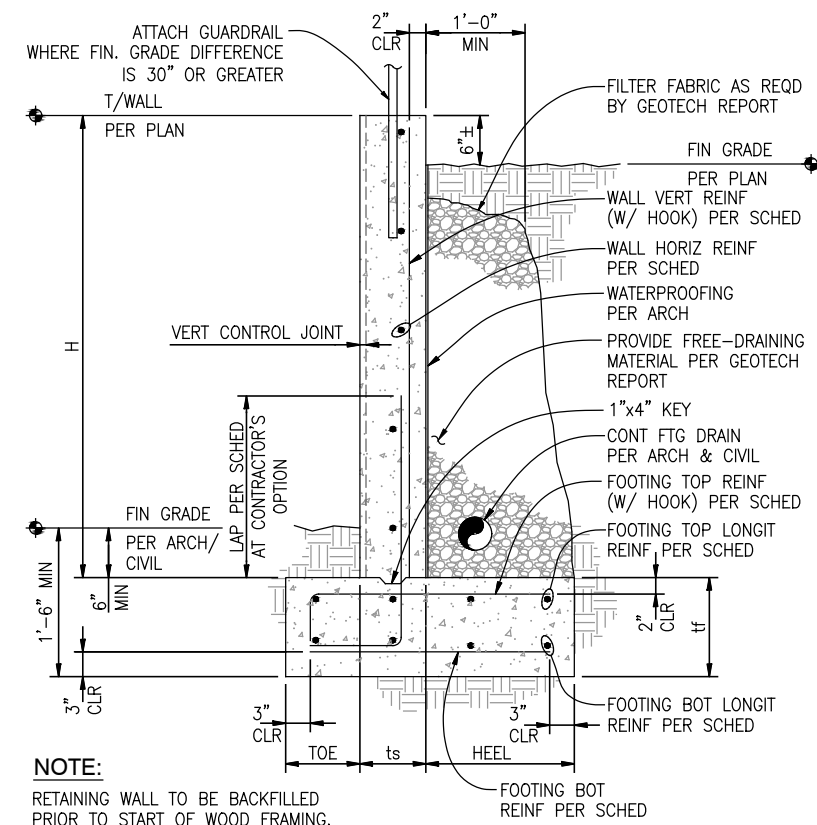
THIS DETAIL ASSUMES THE PLANTING SPACE IS LARGER THAN 2400 MM (8 FT.) SQUARE, OPEN TO THE SKY, AND NOT COVERED BY ANY PAVING OR GRATING.

Tree Planting Detail - B & B Trees in all Soil Types

DRAWING NUMBER: P-5000 DRAWN BY: SJ SCALE: N.T.S.

FILE NAME: P-5000.dwg APPROVED BY: SA DATE: 3/22/06

CITY OF WILSONVILLE
PUBLIC WORKS STANDARDS



CANTILEVERED SITE RETAINING WALL AND SCHEDULE
SCALE: N.T.S.

1
C5.01

H	WALL/FOOTING SIZES				WALL REINFORCEMENT		FOOTING REINFORCEMENT			
	TOE	ts	HEEL	tf	VERTICAL	HORIZONTAL	TOP	TOP/LONGIT	BOTTOM/LONGIT	BOTTOM
UP TO 5'-0"	9"	8"	1'-3"	12"	#4 @ 16"OC	#5 @ 18"OC	#5 @ 10"OC	(3) #4	(3) #4	#5 @ 10"OC

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12" MAX

12" MAX

3:1 MAX SIDE SLOPES (TYP.)

2" FLAT BOTTOM

RIVER ROCK (NOTE 11)

FOR PARKING LOTS, TIRE STOPS OR CURBS IN CUTS 12" x 12" CLEAR FLOW AREA AT CUTS

4" (NOTE 4)

12" (NOTE 2)

6" (NOTE 8)

12" (NOTE 6)

TO FLOW CONTROL STRUCTURE (DETAIL ST-6106)

OVERFLOW PIPING

PERFORATED PIPE RUNNING LENGTH OF DRAIN ROCK (NOTE 9)

GROWING MEDIUM

SEPARATION LAYER (NOTE 7)

DRAIN ROCK (NOTE 8)

LINER # REQUIRED (NOTE 10)

EXISTING SUBGRADE (NOTE 13)

GENERAL NOTES:

- PROVIDE PROTECTION FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED SWALES ARE PREFERRED TO ALLOW MAXIMUM INFILTRATION.
- DIMENSIONS:
-DEPTH OF SWALE (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION): 12"
-LONGITUDINAL SLOPE OF SWALE: 0.0% OR LESS
-FLAT BOTTOM WIDTH: 2" MINIMUM
-SIDE SLOPES OF SWALE: 3:1 MAXIMUM
- LOCATION/SETBACKS:
-INFILTRATION SWALES SHALL BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES UNLESS APPROVED BY BUILDING OFFICIAL
-INLET ELEVATION SHALL ALLOW FOR 4" OF FREEBOARD, MINIMUM.
-PROTECT FROM DEBRIS AND SEDIMENT WITH STRAINER OR GRATE.
- PIPING:
-PERFORATED UNDER-DRAIN PIPING: SHALL BE ABS SCH. 40, CAST IRON, OR PVC SCH. 40. MINIMUM DIAMETER IS 6". PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
-OVERFLOW PIPING: SHALL BE ABS SCH. 40, CAST IRON, OR PVC SCH. 40 AND SHALL NOT BE PERFORATED. MINIMUM DIAMETER IS 6". PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
- DRAIN ROCK:
-SIZE: 1 1/2" - 3/4" WASHED
-DEPTH: 12"
- SEPARATION BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
- GROWING MEDIUM:
-18" MINIMUM
-SEE APPENDIX C FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
-FACILITY SURFACE AREA MAY BE REDUCED BY 25% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
- VEGETATION: FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
- WATERPROOF LAYER (IF REQUIRED): SHALL BE 50 MIL PVC OR EQUIVALENT.
- INSTALL RIVER ROCK SPLASH PAD OVER A NON WOVEN GEO TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3", 4 SQUARE FEET, 6" DEEP.
- CHECK DAMS: SHALL BE PLACED ACCORDING TO FACILITY DESIGN. REFER TO DETAIL ST-6100 FOR PROFILE AND SPACING.
- SEASONAL HIGH GROUNDWATER SEPARATION:
-SEPARATION DISTANCE AS REQUIRED BY CITY.

Vegetated Swale - Filtration

DRAWING NUMBER: ST-6045 DRAWN BY: SR SCALE: N.T.S.

FILE NAME: ST-6045.DWG APPROVED BY: NK DATE: 4/16/18

CITY OF WILSONVILLE
PUBLIC WORKS STANDARDS

Item 2.

PREPARED BY: **MDCI ENGINEERS**
921 SW WASHINGTON ST. • SUITE 100
PORTLAND, OREGON 97205
PHONE: (503) 242-2448 • FAX: (503) 242-2449
WEBSITE: WWW.MDCI-ENGINEERS.COM
CIVIL / STRUCTURAL
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SIGNATURE: **ROBERT JAMES STEER**
REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 15, 2003
61270PE
EXPIRES: 12/31/2022

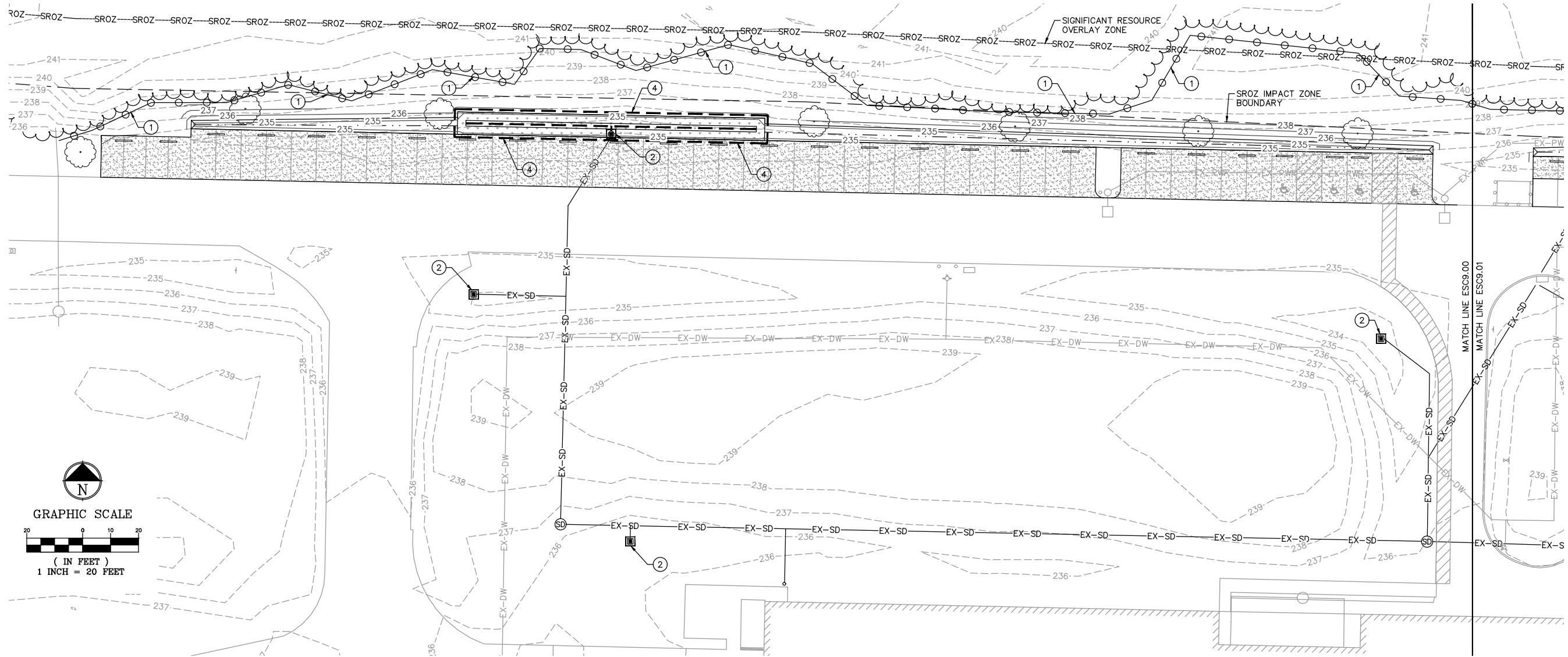
REVISIONS:

APPROVALS:
Job No.: 21032-0041
Proj. Manager: R.J.L.
Designed: K.L.E.
Reviewed: R.J.L.
Drawn: K.L.E.
Dwg. Checked: R.J.L.
Scale: AS SHOWN

PROJECT TITLE: **ESS INC. SITE IMPROVEMENTS**

SHEET TITLE: **CIVIL DETAILS**

SHEET NO. **C5.01** 69



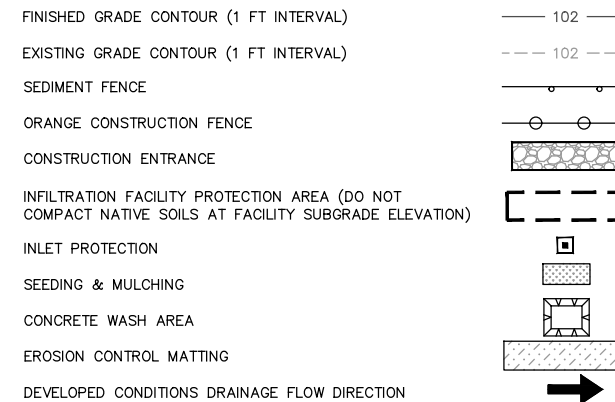
EROSION AND SEDIMENT CONTROL GENERAL NOTES:

1. ALL BASE EROSION CONTROL MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. SENSITIVE RESOURCES, INCLUDING BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING ON CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, STREET SWEEPING AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUNOFF CONTROL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.
6. THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

(X) EROSION AND SEDIMENT CONTROL KEYNOTES:

1. INSTALL AND MAINTAIN TEMPORARY 6' TALL CHAIN LINK TREE PROTECTION FENCE PER CITY OF WILSONVILLE DRAWING NUMBER RD-1230, SHEET ESC9.10. LOCATION OF FENCE SHALL BE INSTALLED AT THE TREE DRIP LINE. VERIFY TREE DRIP LINE IN THE FIELD PRIOR TO INSTALLING TREE PROTECTION FENCE. NO CONSTRUCTION ACTIVITIES OR MATERIAL STORAGE SHALL OCCUR WITHIN THE TREE PROTECTION ZONE.
2. INSTALL STORMWATER INLET PROTECTION PER CLACKAMAS COUNTY DETAIL DRAWING 4-18/ESC9.10.
3. INSTALL CONCRETE WASHOUT PER DETAIL 1/ESC9.10.
4. PROTECT STORMWATER SWALE FACILITY AREA. DO NOT COMPACT SOILS WITHIN STORMWATER FACILITY AREAS. STORMWATER AREAS SHALL PRESERVE EXISTING SOIL DENSITY BY LIMITING HEAVY MACHINERY AND VEHICLE TRACKING, AND STORAGE SHALL NOT OCCUR WITHIN THESE AREAS.

EROSION AND SEDIMENT CONTROL LEGEND



PREPARED BY: **EDCI ENGINEERS**
 921 SW WASHINGTON ST. • SUITE 200
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.EDCI-ENGINEERS.COM
 CIVIL / STRUCTURAL ENGINEERS
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SIGNATURE: **ROBERT JAMES STEEF**
 REGISTERED PROFESSIONAL ENGINEER
 OREGON JULY 15, 2003
 61270PE
 EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041	Project Manager: R.J.L.
Designed: K.L.E.	Reviewed: R.J.L.
Drawn: K.L.E.	Dwg. Checked: R.J.L.
Scale: AS SHOWN	

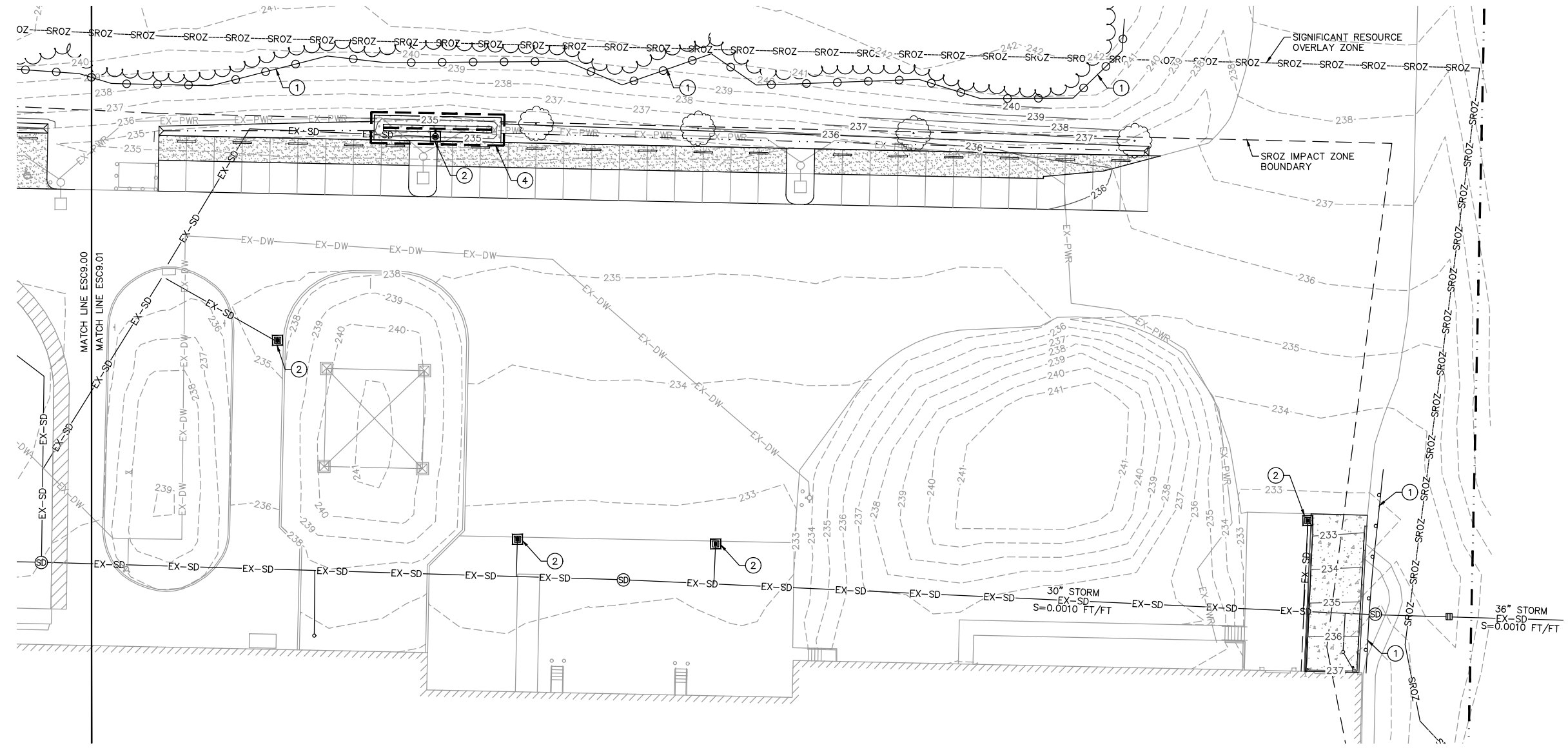
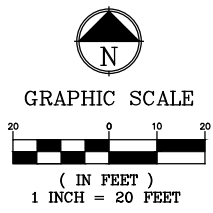
PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN - WEST

SHEET NO.
ESC9.0

SHEET NO. **70**

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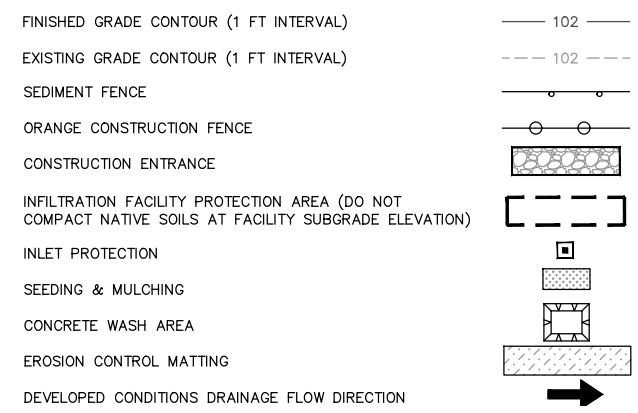
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EROSION AND SEDIMENT CONTROL LEGEND



PREPARED BY: **EDCI ENGINEERS**
 921 SW WASHINGTON ST. • SUITE 100
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.EDCI-ENGINEERS.COM
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APPROVALS:

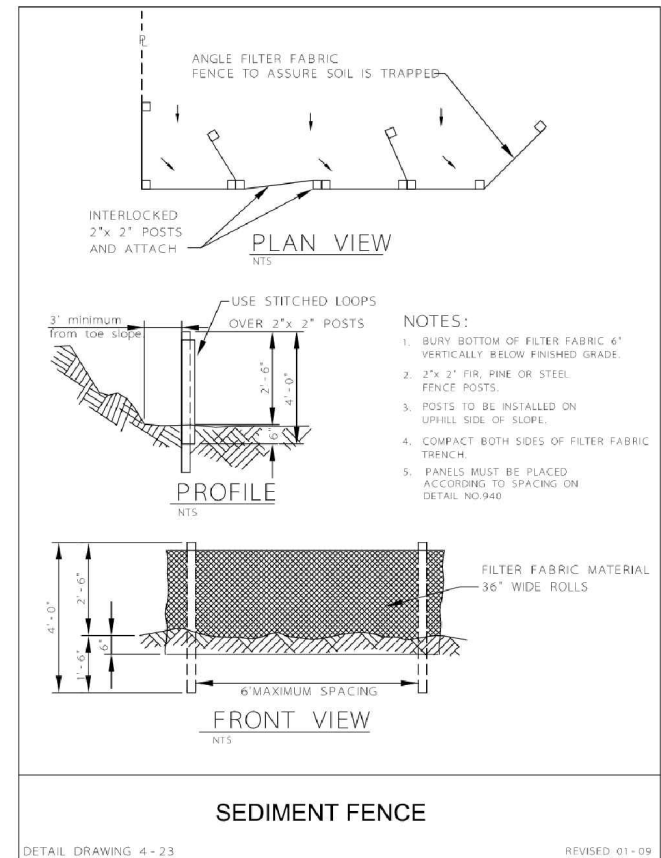
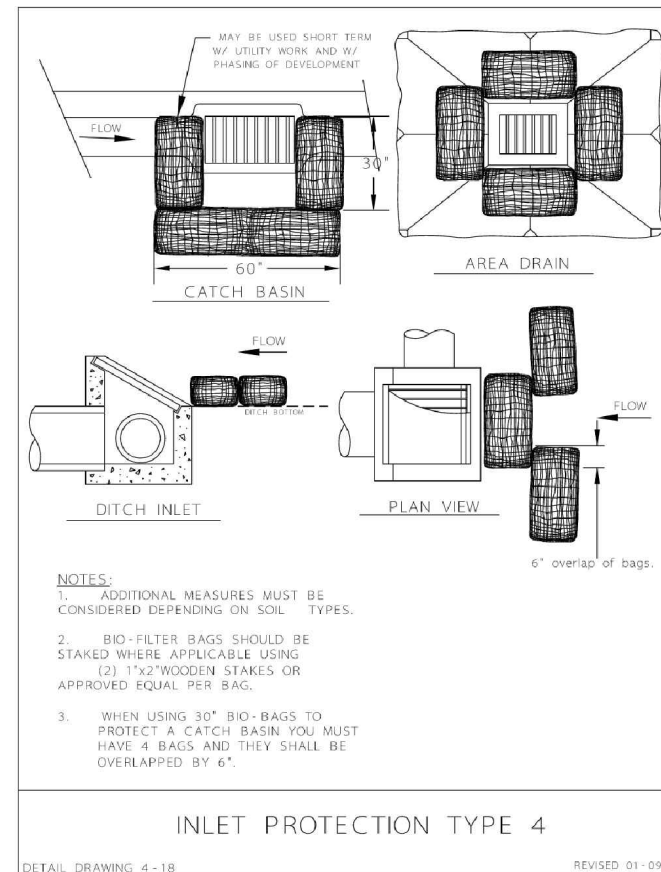
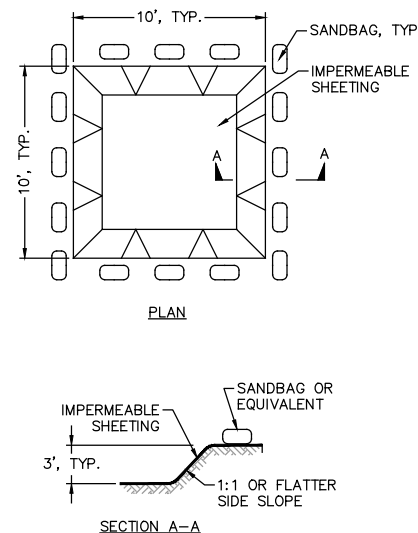
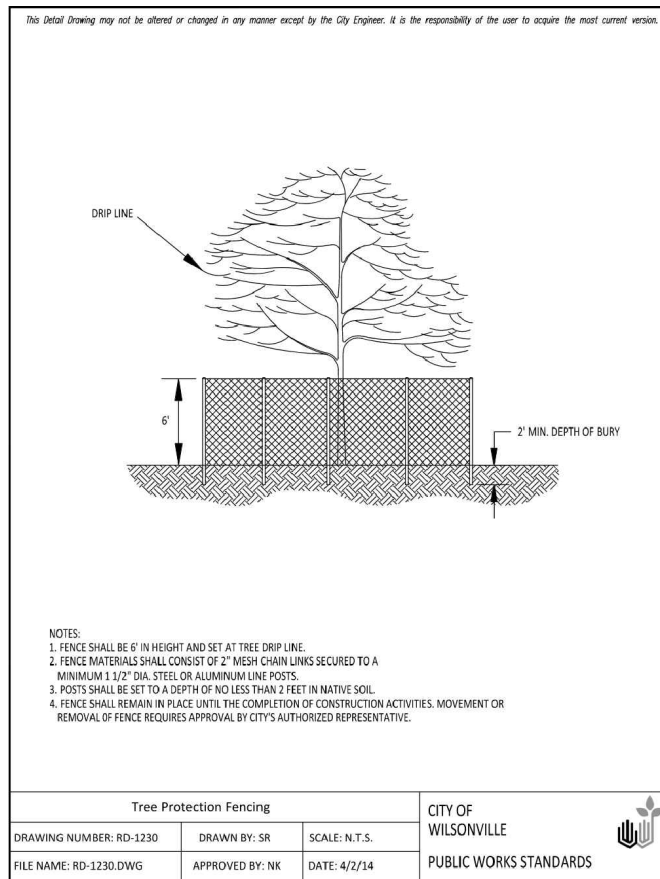
Job No.: 21032-0041
Proj. Manager: R.J.L.
Designed: K.L.E.
Reviewed: R.J.L.
Drawn: K.L.E.
Dwg. Checked: R.J.L.
Scale: AS SHOWN

PROJECT TITLE: **ESS INC. SITE IMPROVEMENTS**

SHEET TITLE: **EROSION AND SEDIMENT CONTROL PLAN - EAST**

SHEET NO. **ESC9.0** **71**

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 Plot Date: 2022-12-14
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PREPARED BY:
EDCI ENGINEERS
 921 SW WASHINGTON ST. • SUITE 100
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.EDCI-ENGINEERS.COM
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SIGNATURE:
 REGISTERED PROFESSIONAL ENGINEER
 OREGON
 JULY 15, 2003
 ROBERT JAMES STEFFER
 EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041	Proj. Manager: RJJ
Designed: KLE	Reviewed: RJJ
Drawn: KLE	Dwg. Checked: RJJ
Scale: AS SHOWN	

PROJECT TITLE:
 ESS INC. SITE IMPROVEMENTS

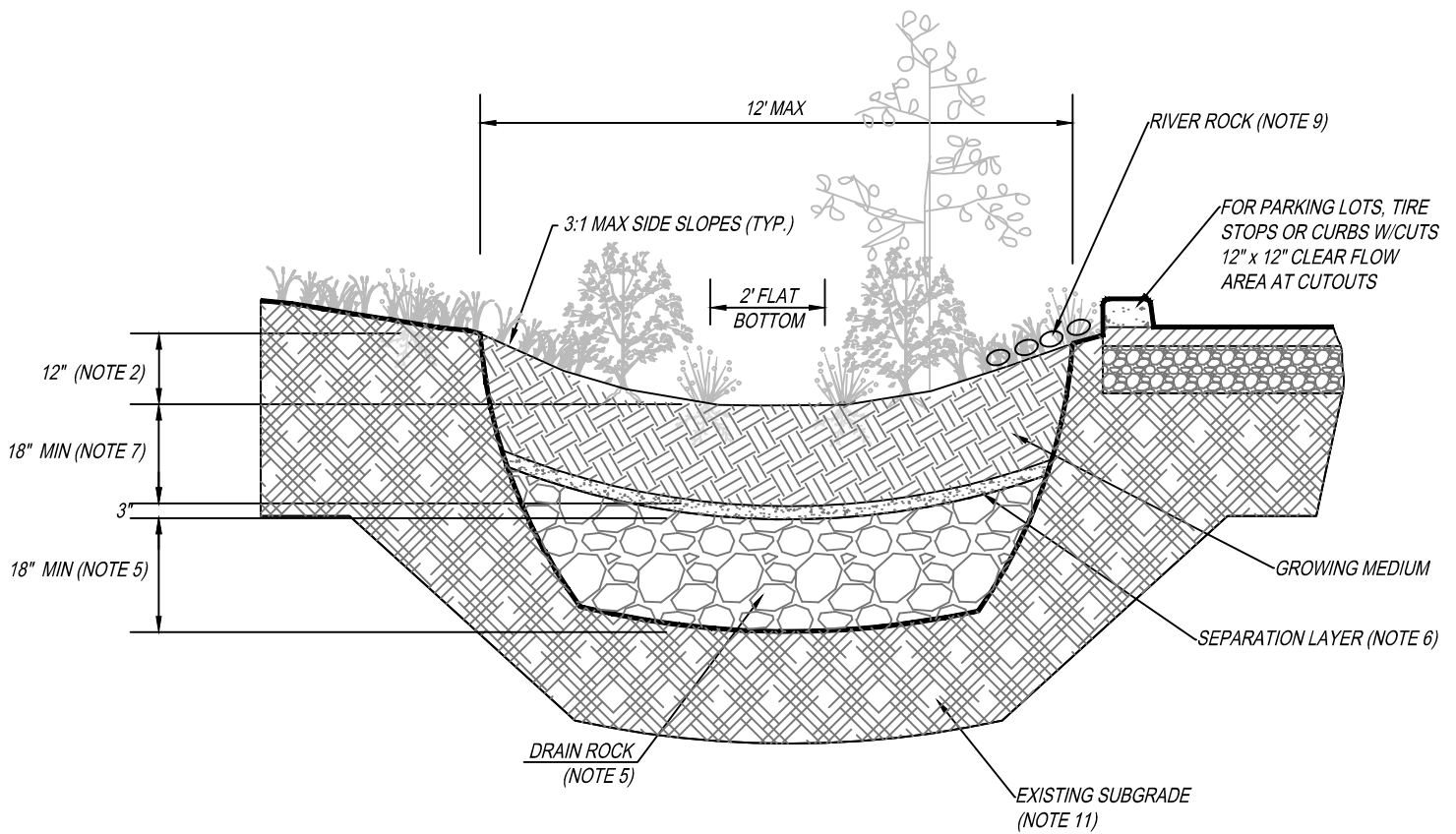
SHEET TITLE:
 EROSION AND SEDIMENT CONTROL DETAILS

SHEET NO.:
 ESC9.1 72



Appendix C

City of Wilsonville Stormwater Notes



GENERAL NOTES:

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED SWALES ARE PREFERRED TO ALLOW MAXIMUM INFILTRATION.
2. **DIMENSIONS:**
 - DEPTH OF SWALE (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION); 12"
 - LONGITUDINAL SLOPE OF SWALE: 6.0% OR LESS
 - FLAT BOTTOM WIDTH: 2'
 - SIDE SLOPES OF SWALE: 3:1 MAXIMUM
3. **SETBACKS (FROM MIDPOINT OF FACILITY):**
 - INFILTRATION VEGETATED SWALES SHALL BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES.
4. **OVERFLOW:**
 - EMERGENCY OVERFLOW PATH SHALL BE IDENTIFIED ON THE STORMWATER MANAGEMENT PLAN.
5. **DRAIN ROCK:**
 - SIZE: 1 1/2" - 3/4" WASHED
 - DEPTH: 18"
6. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
7. **GROWING MEDIUM:**
 - 18" MINIMUM
 - SEE APPENDIX C FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
 - FACILITY SURFACE AREA MAY BE REDUCED BY 25% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
8. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
9. **INSTALL RIVER ROCK** SPLASH PAD OVER NON WOVEN GEO TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3", 4 SQUARE FEET, 6" DEEP.
10. **CHECK DAMS:** SHALL BE PLACED ACCORDING TO FACILITY DESIGN. REFER TO DETAIL ST-6100 FOR PROFILE AND SPACING.
11. **SEASONAL HIGH GROUNDWATER SEPARATION:**
 - SEPARATION DISTANCE AS REQUIRED BY CITY.

Vegetated Swale - Infiltration

CITY OF
WILSONVILLE

DRAWING NUMBER: ST-6050

DRAWN BY: SR

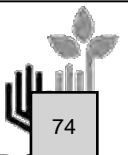
SCALE: N.T.S.

FILE NAME: ST-6050.DWG

APPROVED BY: NK

DATE: 5/3/16

PUBLIC WORKS STANDARDS





Appendix D

Operations and Maintenance Manual

Operations & Maintenance Manual

ESS, Inc. Site Updates
26440 SW Parkway Avenue
Wilsonville, OR 97070

DCI Job Number 21032-0041

December 2022



WIEDEMANN ROAD

VEGETATED STORMWATER FACILITY

VEGETATED STORMWATER FACILITY

OVERFLOW CATCH BASIN LOCATION

OVERFLOW CATCH BASIN LOCATION

EX-SD

EX-SD

EX-SD

EX-SD

EXISTING BUILDING

STORMWATER FACILITIES LOCATION

OPERATIONS AND MAINTENANCE MANUAL

SCALE: 1"=100'



ESS INC_STORMWATER_EXHIBIT_O&M.DWG



City of Wilsonville
Annual Stormwater Facility Inspection and Maintenance Report

Name of Development:
Location/Site Address:
Contact Name:
Telephone:
Email:
Mailing Address (if different from Site Address):

Facilities to be Maintained:

- Catch Basin(s)
Pretreatment Manhole(s)
Flow Control Manhole(s)
Detention Pond(s) # of inlets # of outlets
Rain Garden(s) # of inlets # of outlets
Stormwater Planter(s) # of inlets # of outlets
Vegetated Swale(s) # of inlets # of outlets

All Other Facilities as Described on Plans:

Inspection Date:
Describe Inspection, Maintenance, Repair, or Replanting Activities (attach invoices for work performed):

Owner or Representative Signature

Date





The Owner(s) or Owner's designee shall be responsible for annually conducting inspections and performing maintenance on the above stormwater management facilities annually, in conformance with Section 301.13.00, "Operation and Maintenance Requirements," of the City of Wilsonville Public Works Standards. This requirement pertains to all Stormwater Facilities, including but not limited to: catch basins, pipes, treatment manholes, manholes, trash racks, vegetated swales, and detention ponds.

For vegetated stormwater facilities, particular attention will be given to:

- Examine inlets, outlets, and curb cuts for sediment buildup. Remove sediment as necessary to maintain flow into and out of facility.
- Inspect facility for erosion, gullies, and slope slippage. Repair if present.
- Check for evidence of ponding or slow draining soil media. If necessary, remove and clean or replace the clogged soil media.
- Remove weeds manually.
- Ensure that all plants are healthy. Replace all dead or dying plants with approved plantings.
- Remove trash and excess debris.
- Ensure overflow covers are in place.

For structural facilities and components, particular attention will be given to:

- Remove sediment at least once a year or when basin is half full of sediment.
- Remove trash, oils, and debris.
- Ensure facility is structurally sound by repairing or replacing cracked, loose, askew, or damaged pipes.
- Access covers, trash racks, and metal grates shall be kept free of trash and debris, closed, and in good working order.
- Maintain filter cartridges and other proprietary systems according to manufacturer's recommendations.

Spring 	Summer 	Fall 	Winter 
Remove sediment Remove trash Remove weeds Fix erosion Plant Prune grasses Check irrigation	Remove sediment Remove trash Remove weeds Fix erosion Check irrigation Water plants Structural repairs	Remove sediment Remove trash Remove weeds Fix erosion Plant Drain irrigation Structural repairs	Remove sediment Remove trash Fix erosion Prune trees & shrubs

Vegetated Swales Operations & Maintenance Plan

What to Look For	What to Do
Structural Components, including inlets and outlets/overflows, shall freely convey stormwater.	
Clogged inlets or outlets	-Remove sediment and debris from catch basins, trench drains, curb inlets and pipes to maintain at least 50% conveyance capacity at all times.
Cracked Drain Pipes	-Replace/seal cracks. Replace when repair is insufficient.
Check Dams	-Maintain 4 - 10 inch deep rock check dams at design intervals.
Vegetation	
Dead or strained vegetation	-Replant per original planting plan, or substitute from Appendix A. -Irrigate as needed. Mulch banks annually. DO NOT apply fertilizers, herbicides, or pesticides.
Tall Grass and Vegetation	-Cut back to 4-6 inches, 1-2 times per year. Remove cuttings
Weeds	-Manually remove weeds. Remove all plant debris.
Growing/Filter Medium, including soil and gravels, shall sustain healthy plant cover and infiltrate within 72 hours.	
Gullies	-Fill, lightly compact, and plant vegetation to disperse flow.
Erosion	-Restore or create outfalls, checkdams, or splash blocks where necessary.
Slope Sippage	-Stabilize Slope.
Ponding	-Rake, till, or amend to restore infiltration rate.

Annual Maintenance Schedule:

Summer. Make any structural repairs. Improve filter medium as needed. Clear drain. Irrigate as needed.

Fall. Replant exposed soil and replace dead plants. Remove sediment and plant debris.

Winter. Monitor infiltration/flow-through rates. Clear inlets and outlets/overflows to maintain conveyance.

Spring. Remove sediment and plant debris. Replant exposed soil and replace dead plants. Mulch.

All seasons. Weed as necessary.

Maintenance Records: Record date, description, and contractor (if applicable) for all structural repairs, landscape maintenance, and facility cleanout activities. Keep work orders and invoices on file and make available upon request of the inspector.

Access: Maintain ingress/egress to design standards.

Infiltration/Flow Control: All facilities shall drain within 72 hours. Record time/date, weather, and site conditions when ponding occurs.

Pollution Prevention: All sites shall implement best management practices to prevent hazardous or solid wastes or excessive oil and sediment from contaminating stormwater. Contact _____ for immediate assistance responding to spills. Record time/date, weather, and site conditions if site activities contaminate stormwater.

Vectors (Mosquitoes & Rodents): Stormwater facilities shall not harbor mosquito larvae or rats that pose a threat to public health or that undermine the facility structure. Monitor standing water for small wiggling sticks perpendicular to the water's surface. Note holes/burrows in and around facilities. Call Clackamas County Vector Control for immediate assistance to eradicate vectors. Record time/date, weather, and site conditions when vector activity observed.

Vegetated Swale O & M Plan

DRAWING NUMBER: ST-6055

DRAWN BY: SR

SCALE: N.T.S.

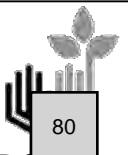
FILE NAME: ST-6055.DWG

APPROVED BY: NK

DATE: 07/18/18

CITY OF
WILSONVILLE

PUBLIC WORKS STANDARDS



- 2. An oil/water separator with a coalescing plate shall be installed between the drainage in catchment and the stormwater BMP treatment facility. The purpose of the device is to treat and remove hydrocarbons from entering the stormwater BMP facility. This device shall be maintained per the manufactures specification and the approved maintenance plan.
 - (a) Coalescing plate separators shall be designed to achieve 100-ppm non-polar oil and grease in the effluent from the peak flow generated by the washing activity. Testing information must be submitted by the manufacturer of the unit that supports the 100-ppm effluent standard at the calculated flow rate.
 - (b) Flow rates will be determined by the drainage area served by the device. The device will be sized to meet the water quality treatment requirements as specified in [Section 301.4.04](#), “Design Criteria”.
 - (c) Separator details must be shown on the building plans submitted at the time of building permit application and shall match manufacturer specifications and details, including the unit flow rate, effluent water quality, and maximum process flow rate.
 - (d) All separators shall be maintained per the manufacture specifications and the applicant shall submit an Operation and Maintenance Plan to be approved by the City.

301.12.16 ODEQ 1200-Z Permit Requirements and Procedures

The requirements in this section apply to facilities identified in Table 1: Sources Covered by the ODEQ New 1200-Z Industrial Stormwater General Permit Document, which can be found in the Water Quality Permit Program section of the ODEQ website.

Facilities identified in Table 1 that may discharge stormwater from a point source to surface waters or to conveyance systems that discharge to surface waters are required to obtain coverage under the 1200-Z permit. To obtain coverage under the permit, facilities must complete the application and registration procedures listed under the *Permit Coverage and Exclusion of Coverage* portion of the New 1200-Z Industrial Stormwater General Permit Document.

301.13.00 OPERATION AND MAINTENANCE REQUIREMENTS

This section describes operation and maintenance requirements that are generally applicable to all private stormwater management facilities. The person designated by the applicant as the responsible party in the Stormwater Maintenance Requirements and Access Easement shall be responsible for operation and maintenance of private stormwater management facilities. An operation and maintenance plan (O&M plan) shall be prepared by the applicant for the stormwater management facility and shall be submitted to the City of Wilsonville Natural Resources Program for review and approval. Maintenance activities shall be documented annually by sending a report of what was completed to the City of Wilsonville Natural Resources Program, by May 1st of each year.

301.13.01 Inspection Program

- a. Routine facility inspection will provide three major benefits:
 - 1. Development of a condition history.
 - 2. Improved scheduling efficiency.
 - 3. Preventive maintenance opportunities.
- b. Inspection records shall be used to:
 - 1. Determine where special maintenance conditions exist.
 - 2. Determine optimal frequencies for future inspection and maintenance.
 - 3. Generate scheduled and unscheduled (i.e., repair) work orders.
 - 4. Assure facility operation and aesthetics.

301.13.02 Requirements

- a. The applicant shall be responsible for having inspections conducted, maintaining stormwater management facilities, and submitting yearly reports documenting inspection and maintenance activities to the City of Wilsonville Natural Resources Program.
- b. Proprietary stormwater management facilities shall be maintained in accordance with the manufacturer specifications and requirements.
- c. Inspection and maintenance of the facilities, with the record drawing plans in hand, shall be done in compliance with the Stormwater Maintenance Requirements and Access Easement. If applicable to the stormwater management facility, the design and maintenance specifications shall be used.
- d. All required inspections and any maintenance activities performed shall be documented in the annual report as required by the City's Stormwater Maintenance Requirement and Access Easement.
- e. Inspection reports shall be in a format and accuracy approved by the City of Wilsonville Natural Resources Program. Inspection reports shall be submitted to the City on a yearly basis.
- f. The applicant shall keep inspection records to track the progressive development of the system over time. The inspection records shall include:
 - 1. General condition of vegetative area(s) and growing medium, predominant plant species, distribution, and success rate (where applicable).
 - 2. Sediment condition and depth in forebay (or other pretreatment structure), treatment facility, bench planting zones, and other sediment-removal components.
 - 3. Water elevations and other observations (sheen, smell, etc.).

- 4. Condition of the inlet, outlet, and overflow structures and devices, diversion structures, trash-removal devices, risers, spillway, embankments, and remaining storage capacity.
- 5. Unscheduled maintenance needs.
- 6. Components that do not meet the performance criteria and require immediate maintenance.
- 7. Common problem areas, solutions, and general observations.
- 8. Aesthetic conditions.

301.13.03 Structures

Applicant shall be responsible for maintaining all facility structures in good working order. Stormwater management facility structures include, but are not limited to, the following: stormwater pipes, stormwater manholes, sand/oil separators, monitoring manholes, flow control devices, energy dissipaters, headwalls, trash grates, underground detention facilities, catch basins, ditch inlets, area drains, clean-outs, access roads, safety fences, sediment fences, and biofiltration bags. Maintenance may consist of cleaning, repairing, and/or replacing structures or portions of structures as needed to maintain their functional purpose.

301.13.04 Planting Bed Soils

- a. In areas where greater than 10% of planting bed vegetation has died, have soil tested as recommended by a Professional Landscape Architect registered in the State of Oregon.
- b. Amend soil as per recommendations of a Professional Landscape Architect registered in the State of Oregon; if needed redesign plantings to correct problems, and reestablish soil coverage.

301.13.05 Vegetation Management

- a. Vegetated stormwater management facilities may require a number of control practices during their initial 2-year period in order to meet the requirements for establishing healthy vegetation.
- b. Requirements
 - 1. Maintain plantings for a period of two years after the date of final construction approval by the City’s authorized representative. During the establishment period, remove undesired vegetation with minimal (or preferably no) use of toxic herbicides and pesticides at least three times in year 1, and once or twice in the summer of year 2, unless otherwise approved by the City’s authorized representative. Replace plants that die during this period as per recommendations and planting time frame given in Appendix B.2.00, “Landscape Guidelines.”
 - 2. At the end of the two-year warranty period, healthy plant establishment shall be achieved for at least 90% of the vegetation (see Section 301.15.02, “Landscape

Inspection for Warranty,” for landscape survival criteria). The O&M plan shall specify the long-term maintenance schedule after the warranty period.

- 3. Selectively irrigate if necessary during the establishment period, during times of drought, or until the vegetation becomes established. It is preferred that the facility be designed to sustain its function without a permanent irrigation system.
- 4. Replenish mulch at least annually, and specify the mulching schedule in the O&M plan. Mulching shall be done to retain topsoil, heat, and moisture, and to inhibit weed growth. Use temporary fencing to protect seedlings from foraging animals.
- 5. Schedule maintenance outside sensitive wildlife and vegetation seasons. Minimize plant disturbance during maintenance activities.
- 6. Do not use fertilizers, herbicides, or pesticides for vegetation maintenance, unless it is specifically called for in the O&M plan.
- 7. Use replacement plants that conform to the initial planting plan and to Appendix B, “Landscape Requirements.”

301.13.06 Sediment Management/Pollutant Control

- a. Sediment and other pollutants that degrade water quality will accumulate in stormwater management facilities. The contractor shall remove all accumulated pollutants and sediment to maintain proper facility operation. Periodic testing will help determine appropriate sediment-removal schedules.
- b. Requirements:
 - 1. Place a sediment marker (see Detail No. S-2260 of these standards) in the forebay or in an area not likely to be damaged by incoming storm flows and where it can be easily seen by maintenance personnel.
 - 2. Remove sediment when accumulations reach 1 foot in depth, 50% of the designed sediment storage depth, or if sediment accumulation inhibits facility operation. The 50% full capacity shall be identified and marked on sediment marker during facility construction.
 - 3. Test sediment before removing it if the stormwater management facility serves a commercial/industrial site or a multifamily structure or development. Sediment shall be tested according to protocol established in the O&M plan, and any additional information resulting from site-specific conditions and use. Testing could include parameters such as oil and grease, heavy metals (lead, zinc, and cadmium), nutrients (e.g., phosphorus), and organics such as pesticides that may accumulate. Testing must be site specific if a commercial/industrial discharger is being served; City of Wilsonville reserves the right to require testing of specific contaminants. Applicant shall provide the test results to the City of Wilsonville Natural Resources Program prior to excavation and disposal of sediment.
 - 4. Dispose of sediments at the time of excavation in a manner meeting applicable state and federal requirements. If sediment disposal requires special handling,

disposal documentation shall be provided to the City of Wilsonville Natural Resources Program.

5. Investigate and control, or report the pollutant source, if sediment or other pollutants are accumulating more rapidly than assumed when the O&M plan was formulated. Direct pollution-control complaints to the City of Wilsonville Natural Resources Program.

301.13.07 Insect/Vector Control

- a. Standing water associated with some types of treatment systems can attract insects.
- b. The following measures shall be the primary methods of insect control. The method are not presented in order of implementation, but one or all of these methods shall be used before considering any other measures:
 1. Install predacious bird and bat nesting boxes.
 2. Change the water level of ponds every four days or so to disrupt the larval development cycle of mosquitoes.
 3. Stock ponds and other permanent water facilities with fish or other predatory species.
 4. Use mosquito larvicide, such as *Bacillus thurengensis* or Altoside[®] formulations, only if absolutely necessary. Any pesticide or larvicide shall be applied by a licensed individual.
- c. Additional assistance with vector monitoring and control may be obtained from the local vector control office.

301.13.08 Access and Safety

O&M programs shall provide for safe and efficient access to a facility and shall be in compliance with Section 101.8.09, "Safety Requirements". The following are general requirements; specific conditions may require site-specific modifications:

- a. Secure easements necessary to provide facility and maintenance access (if applicable).
- b. Use only trained and certified personnel to access confined spaces.
- c. Maintain ingress/egress routes to design standards, in a manner that allows efficient maintenance of the facility.
- d. Ensure that fencing is in good repair.

CARING FOR YOUR STORMWATER FACILITY

THANK YOU

As the owner of a stormwater management facility, you are making a meaningful contribution to the health of Wilsonville’s streams, wetlands and the Willamette River. This handbook will help you maintain your facility to make sure it performs the work it is designed to accomplish.



WHAT ARE STORMWATER FACILITIES?



Stormwater facilities are any combination of landscape and structural features that slow, filter, or infiltrate (absorb) runoff on your property after a rainfall. Types of facilities include vegetated systems (planters, swales, ponds, created wetlands, etc.), and structural systems (ecorooftops, porous pavement and manufactured facilities). Piping, inlets and catch basins are also important components that need adequate maintenance to assure facility function. All of these serve a common purpose: controlling the quality and quantity of stormwater runoff from your site to help safeguard our valuable water resources.

PROPERTY OWNER RESPONSIBILITIES

Federal, state and local agencies created management regulations and guidelines so as to improve stormwater quality and protect watersheds, rivers, streams and drinking water resources. The City of Wilsonville has a Stormwater Maintenance and Access Easement that includes the following requirements:

- Annual maintenance on storm drainage facilities in conformance with City of Wilsonville’s Public Works Standards. For more information go to: www.ci.wilsonville.or.us/Index.aspx?page=127 Go to Important Links at the bottom of the page and click on Public Works Construction Standards 2006 (section 301.6.00 Operations and Maintenance Req.)
- Removal of debris, leaves and sediment from manholes, detention outlet structures, and catch basins.
- Disposal of all oils, sediment and debris in an approved dumpsite.
- Replacement of all dead or dying plants in ponds and swales. Maintenance of original plantings.
- Removal of trash from ditches, swales, catch basins, or any stormwater conveyance.

The steps we take today will greatly influence Wilsonville’s environmental health and quality of life for years to come. Individual actions can make a big difference. Thank you for the significant part you and your stormwater management facility are playing.

* For information or questions about your facility, call the Natural Resources Program at (503) 682-4960

YOUR CONNECTION TO WILSONVILLE'S STREAMS AND THE WILLAMETTE RIVER



THE PROBLEM WITH STORMWATER RUNOFF

When it rains, the stormwater runs off impervious surfaces (such as roofs and paved areas) instead of soaking into the ground.

Conventional stormwater management directs runoff into drains and pipes that carry it offsite and eventually discharge it into a local stream. This approach has a number of harmful effects:

- Impervious areas generate large volumes of runoff relatively quickly. The increased volume and speed of the runoff can cause flooding and erosion and damage natural habitat.
- The runoff picks up a variety of pollutants including oil, pesticides, metals, chemicals, and sediment that negatively impact water quality and fish habitat.
- During warm weather, the runoff absorbs heat from impervious surfaces. This increases the temperature of the receiving waters, with negative impacts on fish and other aquatic life.
- Less water is able to infiltrate into the ground. This reduces groundwater recharge, which reduces summer flows in streams.



For information on the City's stormwater permitting requirements please visit:

www.ci.wilsonville.or.us/Index.aspx?page=693





A BETTER WAY TO FLOW

The City of Wilsonville is actively pursuing a variety of measures to reduce stormwater impacts. One important approach is to manage stormwater on the property where it originates. This is commonly referred to as Low Impact Development. It includes the use of vegetated swales, pervious concrete, rain gardens, eco-roofs, etc. Onsite stormwater management uses processes that mimic nature. Onsite facilities allow runoff to soak into the ground, help filter out pollutants, and slow the flow rate of runoff leaving your site. This significantly reduces the volume and pollution levels in stormwater leaving your property and ending up in local streams and the Willamette River.

WHAT ELSE IS THE CITY DOING?

Onsite management, through the use of Low Impact Development, is just one component of a comprehensive citywide program to limit stormwater runoff impacts. Here are some other steps the City is taking:

- The City requires onsite stormwater management for new construction and redevelopment on public and private property.
- Adhering to and updating the procedures outlined in the Stormwater Master Plan.
- Natural areas, especially riparian areas adjacent to rivers and streams, help filter out pollution, control erosion, and provide shade, food, and habitat for fish and wildlife. The City uses a variety of measures to preserve these critical areas including development and land use zoning requirements and enhancement and restoration efforts.
- In partnership with numerous other organizations, the City provides education and technical assistance aimed at reducing stormwater impacts and promoting watershed health.



INSPECTING AND MAINTAINING YOUR FACILITY

PROTECTING YOUR RESOURCES

It is essential to maintain your facility so it functions as intended and limits off-site environmental impacts. You are required to inspect your facility at a minimum of once a year to determine maintenance needs. Routine inspection and maintenance can help keep overall maintenance costs low by detecting problems early and avoiding large repair or replacement costs. This section identifies general guidelines on what to look for and how to maintain your facility. It also notes non-routine maintenance that may require professional assistance. **If you are unsure of what type of facility you have, call the City of Wilsonville's Natural Resources Program at (503) 682-4960.**



LEGAL REQUIREMENTS: OPERATIONS AND MAINTENANCE PLAN

As a property owner, you are legally required to follow all of the maintenance tasks and schedules outlined in your recorded maintenance and access easement. An Annual Inspection and Maintenance Report must be submitted to the City of Wilsonville no later than May 1 each year (see sample form on page 7). Pictures included with the report are very helpful. Include copies of invoices of work performed by contractors. While inspecting your facility, please keep in mind that it will be necessary for you to refer to your landscape plan in order to maintain your facility as it was originally designed.

INSPECTION SCHEDULE: HOW OFTEN

It is recommended that you inspect your facility at least:

- Quarterly for the first two years
- Once a year thereafter, and
- Within 48 hours of major rainfall events (more than one inch of rain over a 24-hour period).



SAMPLE REPORTING FORM

Stormwater Annual Inspection and Maintenance Report

- The owner(s) or owner's designee shall be responsible for having inspections conducted and maintenance performed on the above private stormwater facilities annually, in conformance with Section 301.6.00, "Operation and Maintenance," of the City of Wilsonville Public Works Standards. All oils, sediment and debris will be removed and deposited in an approved waste disposal site. Any damaged equipment will be repaired promptly.
 - Particular attention will be given to sedimentation and pollution control manholes, and stormwater facility inlet and outlet structures. All debris shall be removed to assure proper functioning.
 - The grates of all catch basins shall be kept free of debris and leaves.
 - The stormwater facility outlet structure(s) shall be checked to assure that sediment accumulation has not encroached on the required stormwater facility volume. Sediment shall be removed as necessary to maintain that required volume.
 - The outlet control manhole shall be inspected to assure that all parts are intact and the orifice is free of any debris that could cause malfunction.
 - Inspect all stormwater facilities for survival and viability of plantings. Replace all dead or dying plants with in-kind plantings, and remove sediments and debris. **Maintain all original landscaping in swales, ponds, etc.**
 - This includes all stormwater facilities including but not limited to: catch basins, pipes, treatment manholes, manholes, trash racks, and structural controls.
- The above inspection and maintenance activities shall be documented annually by sending a signed original letter format report of what was completed to the City of Wilsonville at the mailing address below. **The Annual Inspection and Maintenance Report must be submitted no later than May 1 each year.**

City of Wilsonville
Stormwater Management Coordinator
29799 SW Town Center Loop
Wilsonville, OR 97070

(Stormwater facilities Maintenance Plan Exhibit B Stormwater Maintenance and Access Easement)

Name of Development

Contact _____
Telephone _____
Mailing Address _____

Location
Tax Lot _____
Street Address _____

Facilities to be maintained
 _____ Trapped catch basin(s) (number of each)
 _____ Pollution control manhole(s) (number of each)
 _____ Outlet control manhole(s) (number of each)
 _____ Detention pond(s); _____ tank(s) (number of each)
 _____ WQ pond(s) swales; _____ MH(s); _____ vault(s); _____
 All other facilities as described on plans _____

Inspection Date _____

Describe inspection, maintenance, repair or replanting _____

(Attach invoices for work performed) (Continue above on additional sheet if needed)

Owner, Owners or their Representative Signature _____
Date _____

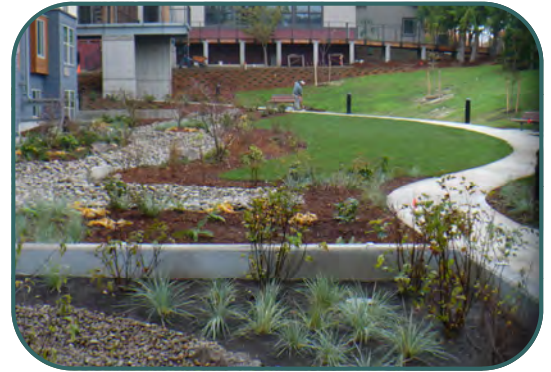
SEDIMENT REMOVAL AND DISPOSAL

FACILITIES AND SYSTEM COMPONENTS THIS APPLIES TO

Vegetated Facilities: ecoroofs, infiltration basins, planters, ponds, swales, trees, vegetated filters, and created wetlands.

Structural Facilities: catch basins, curb cuts, inlets, manufactured facilities, piping, sedimentation manholes, and vaults.

Pervious Pavement: porous concrete or asphalt, permeable pavers.



IMPACT ON FACILITY PERFORMANCE

The purpose of a stormwater treatment facility is to remove pollutants, including suspended solids, by capturing sediment. Sediment can include dirt, leaves, and litter. These materials can restrict or clog the facility. Timely removal of sediment will improve infiltration rates, water quality, and help prevent clogging and flooding.

WHAT TO LOOK FOR

Check the depth of accumulated sediments. Sediment markers can be placed in the facility to help identify depths. Remove sediment when:

Vegetated Facilities:

- Sediment is 4” deep,
- Sediment depth is damaging or killing vegetation, or
- Sediment is preventing the facility from draining within a 24-48 hour period.

Structural Facilities:

- At least once a year, or
- When the basin is half full of sediment.

Pervious Pavement:

- Sediment is preventing the facility from draining in 24 hours.

WHAT TO DO

Often sediment can be removed by hand. Large facilities and underground facilities will need to be cleaned with heavy equipment by trained professionals.

- Remove sediment during dry months when it is easier to remove, weighs less, and creates fewer secondary environmental impacts (such as wet sediment running off the site).

NOTE: It is illegal to hose sediments through your system.

Doing it yourself

Vegetated Facilities:

- Use rakes and shovels to dig out accumulated sediment.
- Avoid damage to existing vegetation.
- If sediment is deep, plants may need to be removed in order to excavate sediment.
- Reseed and mulch disturbed areas to prevent erosion.
- Excavate sand or gravel and clean or replace.



*Doing it yourself (continued)***Structural Facilities, Dispersion Trenches and Pervious Pavement:**

- Catch Basins: Clean debris off the grate and bars. Lift the grate and use a bucket to remove water and a shovel to dig out sediment.
- Curb cuts, piping and other conveyance facilities: Use a shovel, router, air hose or other dry method to clear sediment and debris.
- Dispersion Trenches: Excavate sand or gravel and clean or replace.
- Pervious Pavement: Remove accumulated sediment from the surface with a dry broom, vacuum system, or other hand tools.

Hiring Professionals

Cleaning certain facilities will require professional assistance.

- Underground facilities such as manholes, and manufactured facilities must be cleaned by a vactor truck. Do not enter these facilities. They are defined by the Oregon Occupational Safety and Health Division as confined spaces and require proper certification to enter.
- Certain components such as collection basins, piping or pervious pavement systems may require vacuuming with a vactor truck or street sweeping equipment.

**DISPOSAL**

When deciding how to dispose of sediment, you need to consider the types of activities and pollutants on site. Sediment from commercial or industrial sites is usually not considered hazardous waste. However, as the generator of this waste you are responsible for deciding how to properly manage the removed solids.

Contaminated Water and Sediment

Catch basins and stormwater facilities in areas used for chemical or hazardous waste storage, material handling or equipment maintenance may collect the chemicals used in these activities from spills or via stormwater runoff. If you observe an oily sheen, odors, discoloration, or other signs of pollution, hire a professional laboratory or sampling firm to assess whether the material needs specialized hauling, treatment or disposal to comply with Oregon State Department of Environmental Quality (DEQ) rules. If you need assistance deciding whether the solids should be managed as hazardous waste, contact DEQ.

Non-Contaminated Water and Sediment

If the pollutant load is non-hazardous, water may be spread across vegetation onsite. Let the solids dry out, then properly dispose of them. Temporary erosion control measures may be needed to contain the material onsite. Dry materials may be reused elsewhere on your site, may be eligible for reuse by others, or can be disposed of at a designated solid waste facility.

REDUCING SEDIMENT ACCUMULATION AND POLLUTION IN YOUR FACILITY

- Minimize outside sources of sediment, such as eroding soil upstream of your facility.
- Sweep paved areas on your property regularly.
- Make sure chemical and waste storage areas are not exposed to rainfall and stormwater runoff.
- Don't let water from washing vehicles or equipment drain to your stormwater facility.



RESOURCES

City of Wilsonville Public Works Standards: www.ci.wilsonville.or.us/Index.aspx?page=127

Go to *Important Links* at the bottom of the page and click on *Public Works Construction Standards 2006* (section 301.6.00 Operations and Maintenance Req.)

Environmental Protection Agency: www.cfpub.epa.gov/npdes/home.cfm?program_id=6

Department of Environmental Quality: www.oregon.gov/DEQ

Private Maintenance Companies (listed below are just a few examples of companies that provide maintenance services, more companies are available)

- Clearwater Environmental Services in Wilsonville (503) 582-1951
- River City Environmental in Portland (503) 252-6144
- Bravo Environmental NW in Portland (503) 261-9800



Stormwater runoff has substantial impacts on the water quality and habitat that fish depend on.

By reducing those impacts, we are taking direct action on behalf of threatened species as well as other fish and wildlife that are under stress.

VEGETATION MANAGEMENT

FACILITIES THIS APPLIES TO

Vegetated Facilities: ecoroofs, infiltration basins, planters, ponds, swales, trees, vegetated filters, and created wetlands.

IMPORTANCE TO FACILITY PERFORMANCE

Plants play an important role in stormwater facilities. They absorb water, improve infiltration rates of soil, prevent erosion by stabilizing soil, cool water, and capture pollutants. Plants create habitat for birds and other wildlife and provide aesthetic value to a property. Proper maintenance of vegetation improves the appearance and performance of your facility. Your facility must be kept in accordance with the original landscape design.

WHAT TO LOOK FOR

When identifying maintenance needs it is helpful to have a copy of your landscape plan, this shows the plants you are required to have in your facility. Facilities should be checked for maintenance needs quarterly for the first two years and once a year after that.

Facility needs maintenance when:

- Areas of soil are bare.
- Vegetation is buried by sediment.
- Vegetation appears unhealthy or has died.
- Nuisance and invasive plants are present.
- Vegetation is compromising the facility's structure by blocking inlets or outlets, or roots are intruding into a component of the facility.
- Dropped leaves and other debris are contributing to sediment accumulation or are blocking inlets or outlets.



WHAT TO DO

Maintenance activities can easily be incorporated into existing site landscape maintenance contracts. Vegetation can be maintained with a formal or more natural appearance depending on your preference.

General Maintenance

- Remove dropped leaves, dead plants, and grass and other plant clippings. Plant debris adds nutrient pollution as it breaks down, and can clog facility piping and reduce infiltration.
- Avoid using fertilizers, herbicides, or pesticides in the facility. These products add to the pollution problems the facilities are designed to remedy.
- Use mulch to inhibit weed growth, retain moisture, and add nutrients. Replenish when needed. Ensure mulch does not inhibit water flow.
- Irrigate all new plantings as needed for the first two years.

Caring for wanted vegetation

Facility owners are responsible for maintaining healthy vegetation and must replace any plants that have died or been removed.

- You are required to maintain vegetation to the density approved on your landscape plans or specified in the City's Public Works Standards.
- Replant with vegetation approved for use in the original planting plan or from the recommended plant list in the City's Public Works Standards.

Caring for wanted vegetation (continued)

- Plant in late fall or early spring so plant roots can establish during the cool, rainy seasons, before summer.
- Amend and aerate compacted soils before replanting by adding compost to increase nutrients and enhance soil texture.
- If plants are not surviving, determine the reason for the plant die-off. Survivability may be improved by planting vegetation better suited for the site conditions or by irrigating more. You may need to test planting bed soils for pH, moisture, and other factors such as nutrient levels, soil structure, and organic matter content.



Mowing

- Grassy facilities are designed for routine mowing. Mow at least twice a year.
- Grass should be mowed to keep it 4" to 9" tall. Grass that is at least 4" tall captures more pollutants and is hardier. Do not allow grass to become a fire hazard.

Nuisance and unwanted vegetation

- Remove nuisance and invasive vegetation, such as Himalayan blackberry, English ivy and reed canarygrass, before it goes to seed in the spring. Do additional weeding in the fall. A list of nuisance plants can be found in the Portland Plant List (see below).
- Immediately remove vegetation that is clogging or impeding flow into the facility.
- Remove potentially large and deep-rooted trees or bushes when they might impede the flow path or compromise facility structures.
- Provide ground cover on any dirt exposed by vegetation removal.

Wildlife

Vegetated facilities create habitat, especially for birds. The Migratory Bird Treaty Act protects all native bird species. Birds and other animals will generally adjust to human activity. However, there are simple measures that should be taken to avoid disturbance:

- Avoid maintenance during bird nesting season from early March to late July. Prune and mow during late summer. Many baby birds will spend some time on the ground after leaving a nest.
- Walk the site before you do maintenance. Look for nests, burrows and animals in the facility. Reroute around animal areas by at least a few yards.

RESOURCES

Clackamas County Resources:

Clackamas County Soil and Water Conservation District: www.conservationdistrict.org

Plant Identification:

Native Plant Society: www.npsoregon.org

Master Gardeners: www.extension.oregonstate.edu/mg

Native Plant Nurseries:

Native Plant Nursery: www.plantnative.org

EROSION, BANK FAILURE, CHANNEL FORMATION

FACILITIES THIS APPLIES TO

Vegetated Facilities: ecoroofs, infiltration basins, planters, ponds, swales, trees, vegetated filters, and created wetlands.

IMPORTANCE TO FACILITY PERFORMANCE

Stormwater flowing through a facility can cause erosion. Erosion can increase sediment build up, clog outlets, reduce water quality benefits, add to pollution and cause facility components to fail. Eroded channels create an easy path for water to travel down reducing the ability of the facility to filter pollutants and infiltrate water.

WHAT TO LOOK FOR

Any area with erosion more than two inches deep needs maintenance. Signs of erosion and common locations:

- The formation of flow restricting channels in the bottom of the facility, around inlet pipes and curb cuts, or at overflows.
- Undercutting, scouring, and slumping along banks or berms.
- Channels and undercutting through check dams. (check dams are small berms built across a facility to slow water and create small areas of ponding).

WHAT TO DO

- Fill the eroded area with soil, compact it lightly, and cover with mulch, compost, seed, sod, or other erosion prevention materials.
- Plant banks with deep or heavily rooted plants to permanently stabilize soil.
- Install or repair structures designed to dissipate energy and spread flow, such as splash blocks on downspouts, or riprap around inlet pipes and curb cuts. See the City's Public Works Standards for requirements.
- If erosion continues to be a problem, consult a professional to determine the cause and a solution.
- Replant in accordance with the landscape plan.



STRUCTURAL DEFICIENCIES

FACILITIES THIS APPLIES TO

Most stormwater facilities have some structural components. Some facilities such as vaults, drywells, and sediment manholes are completely structural. In vegetated facilities, structural components often control how water enters, travels through, or exits a facility.

Common structural components include:

- Inflow and outflow pipes, curb cuts, and trenches.
- Valves, orifices, trash racks, and pipes.
- Concrete, metal, and plastic structures and components such as curbs, retaining walls, and manholes.
- Manufactured devices such as filter cartridges.
- Earthworks such as embankments, check dams, dikes, berms and side slopes.
- Riprap and other flow spreading elements.
- Access roads, gates and signs.



IMPORTANCE TO FACILITY PERFORMANCE

These elements need to be in good working order to route flows into a facility and for the facility to function properly.

WHAT TO LOOK FOR

Look at the general condition of these elements. Do they need repair or replacement? Are they still properly aligned? Look for:

- cracks, scratches, dents, rust, or other conditions of wear.
- loose fittings, broken or missing components.
- insufficient oil/grease for moving parts.
- appropriate gravel cover or bedding to support the structures.
- misaligned parts or other impediments to the component's ability to still pass flow.

MAINTENANCE

- Immediately repair or replace any major damage to prevent catastrophic failure. This includes any structural component that is cracked, loose or askew. You may need to consult a professional engineer or hire a trained contractor to design and perform any repairs. Refer to page 10 for a list of resources.
- Minor damage such as dents, or rust spots may not need immediate replacement but should be monitored.
- Maintain access to the facility by keeping the access route open and structurally sound, fence gates and vault lids oiled and locks functioning. Access must be available in an emergency.

PONDING WATER

FACILITIES THIS APPLIES TO

Vegetated Facilities: dry ponds, infiltration basins, planters, rain gardens, sand filters, swales, created wetlands, and vegetated filter strips.

Structural Facilities: manufactured facilities and pervious pavement.

NOTE: Some facilities are specifically designed to always hold water such as: wet ponds, spill control manholes, and sedimentation manholes.

IMPORTANCE TO FACILITY PERFORMANCE

Most facilities are designed to drain in a certain amount of time. This varies from 2 to 48 hours depending on the type of facility. This time is stated in the Operations and Maintenance plan for the type of facility. Ponding water is usually a sign that the facility's outlet is clogged or it is not infiltrating properly.

WHAT TO LOOK FOR

- clogging of overflows or outlets with debris, trash or other obstructions.
- fine sediments filtering into the soil or other filtration media (like sand or gravel) that can prevent proper infiltration.
- water that has remained ponded for more than 48 hours.

MAINTENANCE

- For surface facilities, first try raking the top few inches of soil to break up clogged sections and restore water flow.
- Clean out overflows and outlets with hand tools, if possible. Difficult or hard to access blockages may require a professional contractor.
- Identify sources of sediment and debris to prevent them from entering the facility. Simple actions like sweeping a parking lot regularly can keep sediment out of facilities.
- Make sure the facility has enough vegetation. Vegetation absorbs water and roots help keep soil loose so it can infiltrate water.



For more thorough instructions on removing sediment, see the “Sediment Removal and Disposal” section of this handbook. Sediment accumulated in stormwater facilities may be considered hazardous waste and must be handled and disposed of properly.

If ponding still occurs, contact a landscape architect, professional engineer or trained contractor for more assistance.

PESTS



Nutria photo by NDomer

FACILITIES THIS APPLIES TO

All types of stormwater facilities

IMPORTANCE TO FACILITY PERFORMANCE

Mosquitoes can breed in ponded or other stagnant water. Vegetated areas can be attractive habitat for rats, nutria, beaver, and a variety of birds and amphibians. While some species are desirable, others can be public health or nuisance concerns. In particular, mosquitoes and rats can breed quickly and cause a public health hazard if not removed. The presence of pests does not necessarily impact the ability of your facility to treat and manage stormwater but may indicate maintenance needs, such as lack of proper infiltration.

WHAT TO LOOK FOR

- Check for mosquito larvae in any system with open, slow, or non-moving waters - especially during warmer weather. Larvae look like tiny wiggling sticks floating perpendicular to the water’s surface.
- Look for nutria, rat, and other animal droppings year round. Also check for structural indicators such as beaver dams and rodent holes and burrows.

WHAT TO DO

Mosquitos

- The best way to avoid breeding mosquitoes is to prevent ponding water. Mosquitoes need standing water to lay their eggs, and for their larvae and pupae to develop. Most stormwater facilities are designed to drain in at least 48 hours. If your facility is not draining properly see the “Ponding Water” and “Sediment Removal and Disposal” sections of this handbook.
- As a temporary control for mosquitoes, the county or other licensed professionals can apply pesticides to kill mosquito larvae in the water or adult insects in the air.

Rats

Rats need shelter, food and water to survive.

- Remove plant debris that may provide shelter for rats from the facility.
- Remove fruits and nuts that fall to the ground.
- Fill in burrows.
- Trap and remove individual animals.

Other Wildlife Other non-native and invasive animal species may take up residence in your facility. Contact the Oregon Department of Fish and Wildlife (ODFW) to help identify these species and suggest removal processes. Permits from ODFW are required to capture and relocate native wildlife. Some common non-native species are:

- Opossum
- Eastern gray squirrel
- Nutria
- Bullfrog
- Fox squirrel
- Eastern cottontail
- Egyptian goose
- Red-eared slider turtle
- Snapping turtle



PEST RESOURCES

Rats and mosquitoes:

Clackamas County Vector Control (includes Washington County)

www.clackamas.us/vector

(503) 655-8394

Other pest issues:

Look in yellow pages or on the internet under “Pest Control”

Other Wildlife:

Oregon Department of Fish and Wildlife

www.dfw.state.or.us/wildlife/

(503) 947-6000 or (800) 720-6339



POLLUTION YOU CAN SEE OR SMELL

FACILITIES THIS APPLIES TO

All types of stormwater facilities.

IMPORTANCE TO FACILITY PERFORMANCE

Stormwater facilities often collect a variety of trash and debris. Trash and debris, especially floating debris, can clog pipes or treatment media. It can also cause odors through decay or by collecting spilled or dumped materials. Stormwater facilities are designed to help prevent pollutants from entering rivers and streams. Any visible water quality pollutants may wash out of the facility spreading the pollution problem.

WHAT TO LOOK FOR

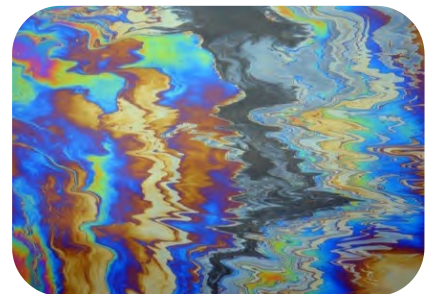
- Check monthly for Trash and debris.

Any unusual or unpleasant smells from sources such as:

- Natural plant decay.
- Dying plants trapped under sediment.
- A spill or a leak (e.g., gasoline or sewage).

Visible pollution such as:

- Sheens
- Turbid (cloudy) water
- Discoloration, or
- Other pollutants on the surface of the water.



*Pollution You Can See And Smell (continued)***WHAT TO DO**

- Regularly remove trash and plant debris.
- Remove accumulated sediment (see “Sediment Removal and Disposal” in this manual).
- Make sure inlets and outlets are not clogged.
- Identify the source of trash, debris or pollutant, such as a spill, leak, or illicit discharge.
- If there is evidence of a spill or leak, contact a professional laboratory or sampling firm to assess whether the material needs specialized removal, treatment, and disposal. Use trained professional staff for any cleanup and remediation.

SAFETY

In addition to keeping the facility in good working order, maintenance should also strive to meet safety and aesthetic goals that benefit the community and protect your site workers. Consider establishing maintenance triggers and practices that respond to the following issues below. Keep in mind the safety of both the employees who maintain your facility and the general public.

WHAT TO LOOK FOR*Site Conditions*

Conditions, such as steep slopes, slick surfaces, and vegetation debris, can create a falling hazard to employees and visitors.

Public Safety

Some stormwater facilities, such as ponds and created wetlands, can be “attractive nuisances” attracting undesirable activity, vandalism, or use that could be harmful to public safety. Consider the safety features now in place at your facility.

WHAT TO DO

- Use barrier plantings or fencing to bar entry into the facility area.
- Install road bollards, lighting, and signage to discourage illegal dumping.
- Avoid maintaining facilities in wet weather to reduce the risk of injuries from slipping. Always make sure that appropriate safety gear (e.g., harness, gloves, face shields, safety line) is used.
- For underground facilities, avoid entering anything defined as a confined space. Vaults, deep ponds, manufactured facilities or manholes are examples of confined spaces. These areas require special permits, training and entry techniques. Some can be inspected and cleaned from above without entering. Always use caution when working with underground facilities. You are legally required to meet Oregon Occupational Safety and Health Division (OR-OSHA) requirements for such activities.

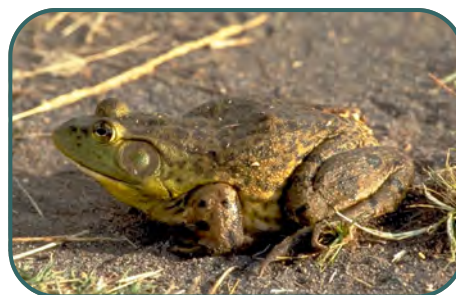
RESOURCES

Confined space entry:

OR-OSHA (confined space entry requirements)

www.orosha.org/subjects/confined_spaces.html

(503) 229-5910



PAYING FOR MAINTENANCE

Specific maintenance costs depend on the characteristics of the facility, the site, and the area draining to the facility. The general rule of thumb is that annual maintenance costs will be 5 to 10% of the facility's total capital cost. Routine, scheduled maintenance can help keep overall costs down by addressing problems before they require major attention. Contact your stormwater system manufacturer for information about your system.

FINANCING MAINTENANCE

You need to determine how you will finance your maintenance needs. A facility maintenance fund is recommended for both capital maintenance procedures (e.g., facility replacement and non-routine maintenance, such as sediment removal, facility component repair or replacement, major replanting, or safety structure construction) and operating maintenance procedures (routine activities such as facility inspection, debris removal, and vegetation management). For homeowner associations, this could be a portion of homeowner fees or a specific assessment.

HOW MUCH TO SAVE

- An average 5 to 10% per year of the facility's capital cost for annual routine maintenance.
- A percentage of the non-routine maintenance costs per year (i.e. for sediment removal, vegetation replacement) based on the needed frequency. For example, if the facility is designed to need mechanical sediment removal every five years, 20% of the total cost should be put aside each year.
- An additional 3 to 5% of the facility's capital cost per year for eventual facility replacement (based on the facility's life expectancy). Most of these facilities have a life expectancy of 25 to 50 years.

VEGETATED FACILITIES

- Most required routine maintenance (excluding major repair and replacement) is estimated to have an annual cost of \$200 to \$600 dollars per acre of facility, above current landscape maintenance costs. Costs can vary depending on the types and level of maintenance practices used.
- The cost and intensity of maintenance activities are usually higher during the two-year plant establishment period. During this time, plants will need additional watering and plants that die will need to be replaced.



WHERE TO GET MORE ASSISTANCE



City of Wilsonville Natural Resources Program

www.ci.wilsonville.or.us/Index.aspx?page=91
(503) 682-4960

City of Wilsonville Public Works Standards:

www.ci.wilsonville.or.us/Index.aspx?page=127 Go to *Important Links* at the bottom of the page and click on *Public Works Construction Standards 2006* (section 301.6.00 Operations and Maintenance Req.)
(503) 682-4092

HIRING CONTRACTORS

Professional maintenance services phone book/internet references:

Vegetation Management:

- “Landscape Contractors”

Sediment Removal and Disposal:

- “Sewage,” or
- “Waste Disposal”

Facility Alterations:

- “Landscape Architects” or
- “Engineers - Civil”

Manufactured Facilities:

- Find the specific manufacturer

CONFINED SPACE ENTRY

Oregon Occupational Safety and Health Division (OR-OSHA):

www.orosha.org/subjects/confined_spaces.html

(503) 229-5910

PEST RESOURCES

Rats and mosquitoes:

Clackamas County Vector Control (includes Washington County)
www.clackamas.us/vector
(503) 655-8394

Other pest issues:


Look in yellow pages or on the internet under “Pest Control”

Other Wildlife:

Oregon Department of Fish and Wildlife
www.dfw.state.or.us/wildlife/
(503) 947-6000 or (800) 720-6339



Portland Audubon Wildlife Care Center
Help with injured animals and animal identification questions:
www.audubonportland.org
(503) 292-0304



The Audubon Wildlife Care Center is the oldest and busiest wildlife rehabilitation facility in Oregon. Each year they treat over 3,000 wild animals for release back to the wild and respond to more than 15,000 wildlife related inquiries.



VEGETATION

Clackamas County Resources:

Clackamas County Soil and Water Conservation District:
www.conservationsdistrict.org

Plant Identification:

Native Plant Society:
www.npsoregon.org

Master Gardeners:
www.extension.oregonstate.edu/mg

Native Plant Nurseries:

Native Plant Nursery:
www.plantnative.org



City of Wilsonville

29799 SW Town Center
Loop E

Phone: 503-682-4960
Fax: 503-682-7025

www.ci.wilsonville.or.us



This brochure was prepared by the City of Wilsonville's Natural Resources Program staff.

March 2012

NOTE: A considerable amount of information was obtained from the City of Portland's Stormwater Management Facilities Operations and Maintenance for Private Property Owners guide.

OTHER WAYS TO PROTECT OUR STREAMS AND THE WILLAMETTE RIVER

In Your Home or Business

- Use nontoxic cleaners.
- Properly dispose of hazardous materials.
- Conserve energy: switch to compact fluorescent bulbs, turn down the heat, do the laundry with cold water, purchase energy-efficient appliances.
- Use water wisely: fix leaks, use low-flow showerheads, use only the water you need.

In Your Yard

- Plant native vegetation.
- Consider planting perennials versus annuals.
- Sweep instead of hose.
- Cover bare soil with mulch or plants.
- Compost yard debris.
- Disconnect downspouts (where appropriate).
- Use drip irrigation.

In and Out of Your Car

- Properly maintain vehicles.
- Wash vehicles where water is recycled.
- Drive less: use transit, bike, walk, or carpool.
- Recycle motor oil.
- Clean up spills or leaks.

In Your Community

- Volunteer for tree planting, cleanup, stream restoration, or invasive plant species removal projects.
- Report spills and illegal dumping (call 503-823-7180).
- Don't litter, and pick up litter when you see it.
- Pick up pet waste and put it in the garbage or toilet.

In Parks and Natural Areas

- Stay on designated hiking trails and biking areas.
- Keep dogs on leashes and away from the streambanks and water. Pick up pet

THANK YOU

*for helping keep Wilsonville clean, healthy
and sustainable and for stewarding this
beautiful place that we all share.*



Appendix E

Geotechnical Infiltration Report

August 16, 2022

DCI Engineers
 921 SW Washington Street, Suite 560
 Portland, OR 97205

Attention: Robert Léger

Report of Infiltration Testing Services

ESS, Inc. Parking Expansion
 26440 SW Parkway Avenue
 Wilsonville, Oregon
 Project: DCIEng-4-01

INTRODUCTION

This report presents the results of our infiltration testing for the proposed parking expansion for the ESS, Inc. facilities located at 26440 SW Parkway Avenue in Wilsonville, Oregon. Preliminary plans include shallow Low Impact Development Approaches style stormwater planters. Our services for this project were conducted in general accordance with our proposal dated July 20, 2022. Figure 1 shows the site vicinity relative to surrounding features. Figure 2 shows the proposed development area and our approximate exploration location.

PURPOSE AND SCOPE

The purpose of our scope was to perform field infiltration testing to assist in design of on-site stormwater disposal systems. Specifically, we conducted the following tasks:

- Coordinated and managed the field exploration, including utility locates and scheduling of NV5 field staff.
- Conducted a subsurface exploration program consisting of drilling one hand auger boring to a depth of 9.5 feet below ground surface (BGS).
- Performed two infiltration tests using the encased falling head test method in general accordance with the City of Wilsonville *Public Works Standards* with up to two and one-half hours of measurements starting during the saturation period. The tests were performed at depths of 2 and 4 feet BGS.
- Maintained a continuous log of the exploration and collected disturbed soil samples at representative intervals.

- Performed the following laboratory testing on samples collected from the exploration:
 - Three natural moisture content determinations in general accordance with ASTM D2216
 - Two particle-size analyses in general accordance with ASTM D1140
- Prepared this report summarizing the test program, presenting the test results, and providing infiltration design recommendations.

SITE CONDITIONS

SURFACE CONDITIONS

The site is currently occupied by an ESS building with associated parking west of the building. The property is bordered to the north by a commercial building and property, to the east by trees, to the west by SW Parkway Avenue, and to the south by Printer Parkway. Figure 1 shows the site location relative to existing features. Exploration of the site was conducted in the north portion of the site where grass was present at the surface.

SUBSURFACE CONDITIONS

We explored subsurface conditions at the site by drilling one hand auger boring (HA-1). The approximate location of the exploration is shown on Figure 2. A description of the field explorations and laboratory testing program, the boring log, and results of the laboratory testing are presented in the Attachment.

A 6-inch-thick root zone and approximately 1.5 feet of fill were observed at the surface. Clay with varying amounts of sand underlies the fill to the maximum depth explored of 9.5 feet BGS. The moisture content of the samples was determined to range from 28 to 49 percent. Particle-size analysis indicated 83 and 69 percent fines at depths of 2 and 4 feet BGS, respectively.

Groundwater was encountered in the hand auger boring at a depth of 7.5 feet BGS. The depth of groundwater may fluctuate in response to seasonal changes, prolonged rainfall, changes in surface topography, and other factors not observed in this study.

INFILTRATION TESTING

Infiltration testing was performed in boring HA-1 at depths of 2 and 4 feet BGS using the encased falling head method and PVC pipe to evaluate the feasibility of on-site stormwater disposal. A representative soil sample was collected below the infiltration test depths for particle-size analysis.

Table 1 summarizes the results of infiltration testing and particle-size analyses. The exploration log and results of particle-size analyses are presented in the Attachment.

Table 1. Infiltration Testing Results

Exploration	Depth (feet BGS)	Soil Description	Percent Fines	Observed Infiltration Rate (inches per hour)
HA-1	2.0	Clay with sand	83	0.9
HA-1	4.0	Sandy clay	69	2.5

As summarized in Table 1, the shallow soil at the site has very low infiltration capacity.

The infiltration rates presented in Table 1 are short-term field rates and factors of safety have not been applied for the type of infiltration system being considered. Correction factors should be applied to the measured infiltration rate to account for soil variations and the potential for long-term clogging due to siltation and buildup of organic material. Without additional testing, from a geotechnical perspective, we recommend a minimum factor of safety of at least 2 be applied to the field infiltration values presented in Table 1 to account for soil variability with depth.

The infiltration flow rate of infiltration systems will diminish over time as suspended solids and precipitates in the stormwater slowly clog the void spaces between the soil particles. Eventually, systems may fail and will need to be replaced or repaired. We recommend that any infiltration system be designed to overflow to a suitable discharge point such as the storm sewer or an acceptable overland release. Finally, stormwater infiltration systems will cause localized high groundwater levels; therefore, they should not be located near basement walls, retaining walls, or other embedded structures unless these are specifically designed to account for the resulting hydrostatic pressure.

LIMITATIONS

We have prepared this report for use by DCI Engineers and members of the design and construction teams for the proposed project. The data and report can be used for bidding or estimating purposes, but our report, conclusions, and interpretations should not be construed as warranty of the subsurface conditions and are not applicable to other nearby building sites.

Exploration observations indicate soil conditions only at specific locations and only to the depths penetrated. They do not necessarily reflect soil strata or water level variations that may exist between exploration locations. If subsurface conditions differing from those described are noted during the course of excavation and construction, re-evaluation will be necessary.

The site development plans and design details were preliminary at the time this report was prepared. When the design has been finalized and if there are changes in the site grades, location, or configuration; design loads; or type of construction, the conclusions and recommendations presented may not be applicable. If design changes are made, we request that we be retained to review our conclusions and recommendations and to provide a written modification or verification if needed.

The scope does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in this report for consideration in design.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in this area at the time this report was prepared. No warranty, expressed or implied, should be understood.

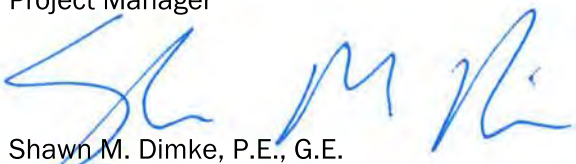
We appreciate the opportunity to be of continued service to you. Please call if you have questions concerning this report or if we can provide additional services.

Sincerely,

NV5



Jessica Pence, E.I.T.
Project Manager



Shawn M. Dimke, P.E., G.E.
Principal Engineer



JJP:SMD:sn

Attachments

One copy submitted

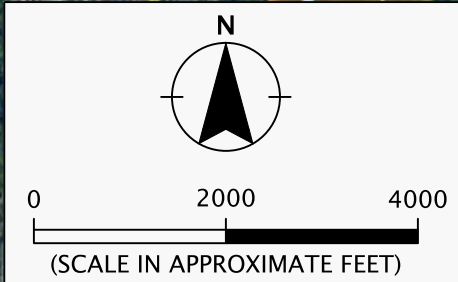
Document ID: DCIEng-4-01-081622-geolr

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FIGURES



VICINITY MAP BASED ON AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH PRO®



Printed By: mmiller | Print Date: 8/8/2022 1:53:28 PM
 File Name: J:\A-D\DCIEng\4\DCIEng-4-01\Figures\CAD\DCIEng-4-01-VM01.dwg | Layout: FIGURE 1

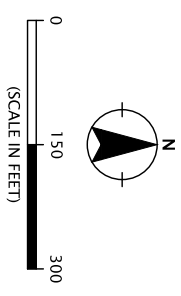
	DCIENG-4-01	VICINITY MAP	
	AUGUST 2022	ESS, INC. PARKING EXPANSION WILSONVILLE, OR	FIGURE 112

Item 2.



LEGEND:
 HA-1 HAND AUGER BORING

SITE PLAN BASED ON AERIAL PHOTOGRAPH DATED
 MAY 10, 2021, OBTAINED FROM GOOGLE EARTH PRO.



DCIENG-4-01
 AUGUST 2022

SITE PLAN
 ESS, INC. PARKING EXPANSION
 WILSONVILLE, OR

FIGURE 2

113

ATTACHMENT

ATTACHMENT

FIELD EXPLORATIONS

GENERAL

We explored subsurface conditions at the site by advancing one boring (HA-1) with a hand auger to a maximum depth of 9.5 feet BGS. The exploration was conducted on August 2, 2022. The boring log is presented in this attachment.

SOIL SAMPLING

We collected soil samples for geotechnical laboratory testing. Representative disturbed samples of soil observed in the borings were collected from the auger tip. Sampling methods and intervals are shown on the exploration log.

SOIL CLASSIFICATION

The soil samples were classified in the field in accordance with the "Exploration Key" (Table A-1) and "Soil Classification System" (Table A-2), which are presented in this attachment. The exploration log indicates the depths at which the soil characteristics change, although the change actually could be gradual. If the change occurred between sample locations, the depth was interpreted. Classifications are shown on the exploration log.

LABORATORY TESTING

CLASSIFICATION

The soil samples were classified in the laboratory to confirm field classifications. The laboratory classifications are shown on the exploration log, if those classifications differed from the field classifications.

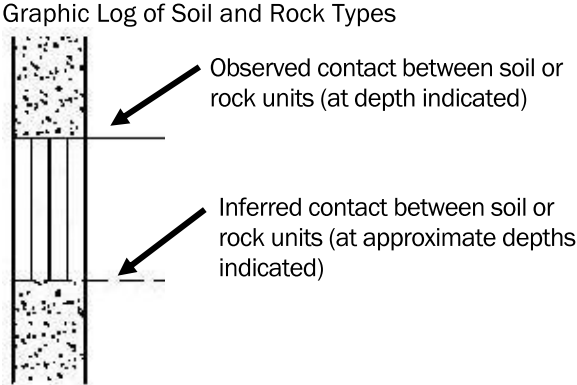
MOISTURE CONTENT

The natural moisture content of select soil samples was determined in general accordance with ASTM D2216. The natural moisture content is a ratio of the weight of the water to dry soil in a test sample and is expressed as a percentage. The test results are presented in this attachment.

PARTICLE-SIZE ANALYSIS

Particle-size analysis was performed on select soil samples in general accordance with ASTM D1140. This test is a quantitative determination of the amount of material finer than the U.S. Standard No. 200 sieve expressed as a percentage of soil weight. The test results are presented in this attachment.

SYMBOL	SAMPLING DESCRIPTION
	Location of sample collected in general accordance with ASTM D1586 using Standard Penetration Test (SPT) with recovery
	Location of sample collected using thin-wall Shelby tube or Geoprobe® sampler in general accordance with ASTM D1587 with recovery
	Location of sample collected using Dames & Moore sampler and 300-pound hammer or pushed with recovery
	Location of sample collected using Dames & Moore sampler and 140-pound hammer or pushed with recovery
	Location of sample collected using 3-inch-outside diameter California split-spoon sampler and 140-pound hammer with recovery
	Location of grab sample
	Rock coring interval
	Water level during drilling
	Water level taken on date shown



GEOTECHNICAL TESTING EXPLANATIONS

ATT	Atterberg Limits	P	Pushed Sample
CBR	California Bearing Ratio	PP	Pocket Penetrometer
CON	Consolidation	P200	Percent Passing U.S. Standard No. 200 Sieve
DD	Dry Density	RES	Resilient Modulus
DS	Direct Shear	SIEV	Sieve Gradation
HYD	Hydrometer Gradation	TOR	Torvane
MC	Moisture Content	UC	Unconfined Compressive Strength
MD	Moisture-Density Relationship	VS	Vane Shear
NP	Non-Plastic	kPa	Kilopascal
OC	Organic Content		

ENVIRONMENTAL TESTING EXPLANATIONS

CA	Sample Submitted for Chemical Analysis	ND	Not Detected
P	Pushed Sample	NS	No Visible Sheen
PID	Photoionization Detector Headspace Analysis	SS	Slight Sheen
ppm	Parts per Million	MS	Moderate Sheen
		HS	Heavy Sheen



EXPLORATION KEY

TABLE A

RELATIVE DENSITY - COARSE-GRAINED SOIL

Relative Density	Standard Penetration Test (SPT) Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)
Very loose	0 - 4	0 - 11	0 - 4
Loose	4 - 10	11 - 26	4 - 10
Medium dense	10 - 30	26 - 74	10 - 30
Dense	30 - 50	74 - 120	30 - 47
Very dense	More than 50	More than 120	More than 47

CONSISTENCY - FINE-GRAINED SOIL

Consistency	Standard Penetration Test (SPT) Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)	Unconfined Compressive Strength (tsf)
Very soft	Less than 2	Less than 3	Less than 2	Less than 0.25
Soft	2 - 4	3 - 6	2 - 5	0.25 - 0.50
Medium stiff	4 - 8	6 - 12	5 - 9	0.50 - 1.0
Stiff	8 - 15	12 - 25	9 - 19	1.0 - 2.0
Very stiff	15 - 30	25 - 65	19 - 31	2.0 - 4.0
Hard	More than 30	More than 65	More than 31	More than 4.0

PRIMARY SOIL DIVISIONS

GROUP SYMBOL

GROUP NAME

COARSE-GRAINED SOIL (more than 50% retained on No. 200 sieve)	GRAVEL (more than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (< 5% fines)	GW or GP	GRAVEL
		GRAVEL WITH FINES (≥ 5% and ≤ 12% fines)	GW-GM or GP-GM	GRAVEL with silt
			GW-GC or GP-GC	GRAVEL with clay
		GRAVEL WITH FINES (> 12% fines)	GM	silty GRAVEL
			GC	clayey GRAVEL
	GC-GM		silty, clayey GRAVEL	
	SAND (50% or more of coarse fraction passing No. 4 sieve)	CLEAN SAND (<5% fines)	SW or SP	SAND
		SAND WITH FINES (≥ 5% and ≤ 12% fines)	SW-SM or SP-SM	SAND with silt
			SW-SC or SP-SC	SAND with clay
		SAND WITH FINES (> 12% fines)	SM	silty SAND
SC			clayey SAND	
SC-SM			silty, clayey SAND	
FINE-GRAINED SOIL (50% or more passing No. 200 sieve)	SILT AND CLAY Liquid limit less than 50	ML	SILT	
		CL	CLAY	
		CL-ML	silty CLAY	
		OL	ORGANIC SILT or ORGANIC CLAY	
	SILT AND CLAY Liquid limit 50 or greater	MH	SILT	
		CH	CLAY	
		OH	ORGANIC SILT or ORGANIC CLAY	
		PT	PEAT	

HIGHLY ORGANIC SOIL

MOISTURE CLASSIFICATION

ADDITIONAL CONSTITUENTS

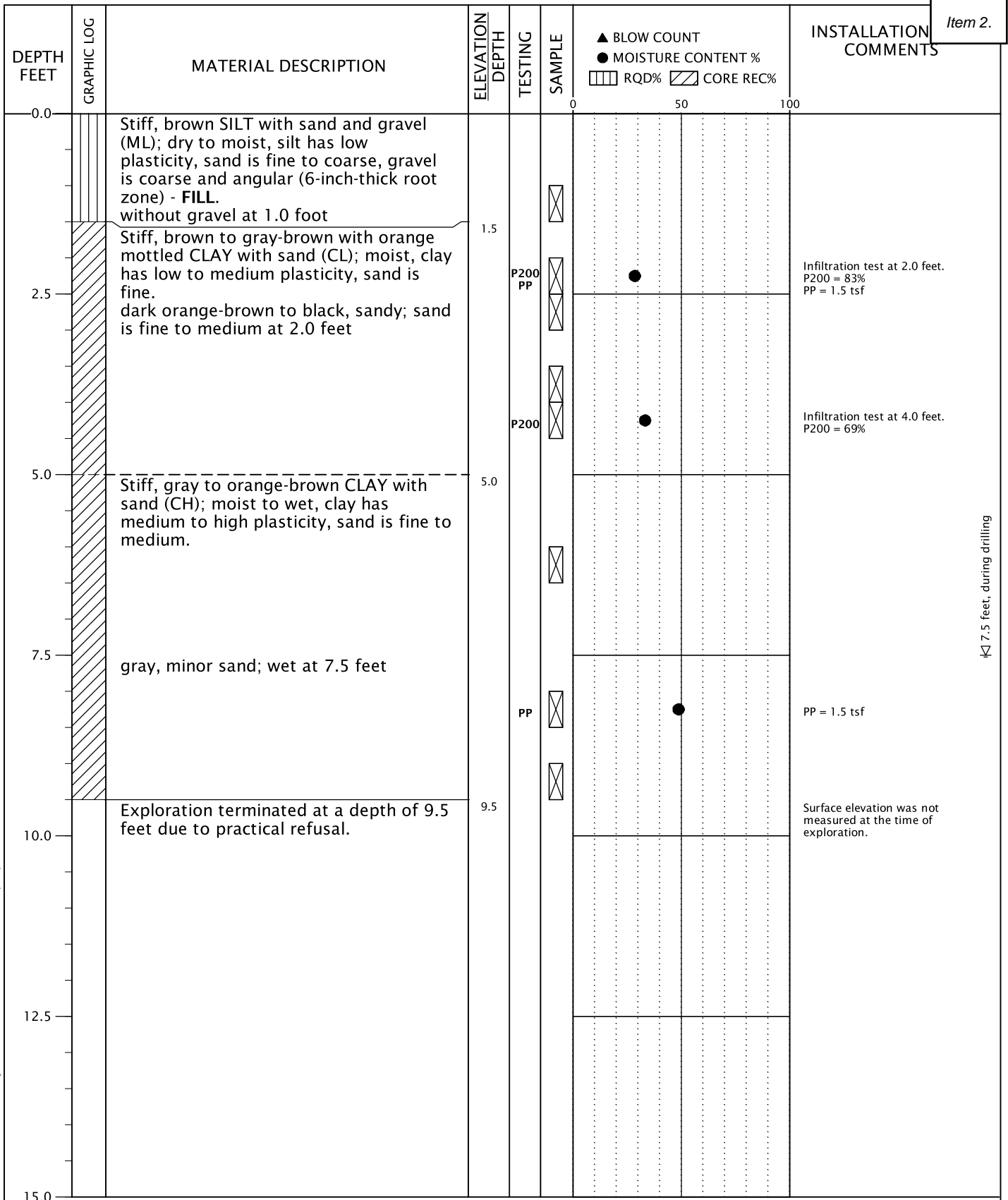
Term	Field Test	Secondary granular components or other materials such as organics, man-made debris, etc.					
		Percent	Silt and Clay In:		Percent	Sand and Gravel In:	
	Fine-Grained Soil		Coarse-Grained Soil			Fine-Grained Soil	Coarse-Grained Soil
dry	very low moisture, dry to touch	< 5	trace	trace	< 5	trace	trace
moist	damp, without visible moisture	5 - 12	minor	with	5 - 15	minor	minor
		> 12	some	silty/clayey	15 - 30	with	with
wet	visible free water, usually saturated				> 30	sandy/gravelly	Indicate %



SOIL CLASSIFICATION SYSTEM

TABLE A-2

Item 2.



7.5 feet, during drilling

BORING LOG - NV5 - 1 PER PAGE DCIENG-4-01-HA1.GPJ GDI_NV5.GDT PRINT DATE: 8/16/22:KT:SN

DRILLED BY: NV5 staff

LOGGED BY: S. Freeman

COMPLETED: 08/02/22

BORING METHOD: hand auger (see document text)

BORING BIT DIAMETER: 6 inches



DCIENG-4-01

BORING HA-1

AUGUST 2022


ESS, INC. PARKING EXPANSION
WILSONVILLE, OR

FIGURE A

118

SAMPLE INFORMATION			MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	SIEVE			ATTERBERG LIMITS		
EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	ELEVATION (FEET)			GRAVEL (PERCENT)	SAND (PERCENT)	P200 (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
HA-1	2.0		28			83				
HA-1	4.0		33			69				
HA-1	8.0		49							

LAB SUMMARY - GDI-NV5 DCIENG-4-01-HA1.GPJ GDI_NV5.GDT PRINT DATE: 8/10/22:SN

	DCIENG-4-01	SUMMARY OF LABORATORY DATA	
	AUGUST 2022	ESS, INC. PARKING EXPANSION WILSONVILLE, OR	FIGURE A

August 16, 2022

DCI Engineers
921 SW Washington Street, Suite 560
Portland, OR 97205

Attention: Robert Léger

Report of Infiltration Testing Services

ESS, Inc. Parking Expansion
26440 SW Parkway Avenue
Wilsonville, Oregon
Project: DCIEng-4-01

INTRODUCTION

This report presents the results of our infiltration testing for the proposed parking expansion for the ESS, Inc. facilities located at 26440 SW Parkway Avenue in Wilsonville, Oregon. Preliminary plans include shallow Low Impact Development Approaches style stormwater planters. Our services for this project were conducted in general accordance with our proposal dated July 20, 2022. Figure 1 shows the site vicinity relative to surrounding features. Figure 2 shows the proposed development area and our approximate exploration location.

PURPOSE AND SCOPE

The purpose of our scope was to perform field infiltration testing to assist in design of on-site stormwater disposal systems. Specifically, we conducted the following tasks:

- Coordinated and managed the field exploration, including utility locates and scheduling of NV5 field staff.
- Conducted a subsurface exploration program consisting of drilling one hand auger boring to a depth of 9.5 feet below ground surface (BGS).
- Performed two infiltration tests using the encased falling head test method in general accordance with the City of Wilsonville *Public Works Standards* with up to two and one-half hours of measurements starting during the saturation period. The tests were performed at depths of 2 and 4 feet BGS.
- Maintained a continuous log of the exploration and collected disturbed soil samples at representative intervals.



- Performed the following laboratory testing on samples collected from the exploration:
 - Three natural moisture content determinations in general accordance with ASTM D2216
 - Two particle-size analyses in general accordance with ASTM D1140
- Prepared this report summarizing the test program, presenting the test results, and providing infiltration design recommendations.

SITE CONDITIONS

SURFACE CONDITIONS

The site is currently occupied by an ESS building with associated parking west of the building. The property is bordered to the north by a commercial building and property, to the east by trees, to the west by SW Parkway Avenue, and to the south by Printer Parkway. Figure 1 shows the site location relative to existing features. Exploration of the site was conducted in the north portion of the site where grass was present at the surface.

SUBSURFACE CONDITIONS

We explored subsurface conditions at the site by drilling one hand auger boring (HA-1). The approximate location of the exploration is shown on Figure 2. A description of the field explorations and laboratory testing program, the boring log, and results of the laboratory testing are presented in the Attachment.

A 6-inch-thick root zone and approximately 1.5 feet of fill were observed at the surface. Clay with varying amounts of sand underlies the fill to the maximum depth explored of 9.5 feet BGS. The moisture content of the samples was determined to range from 28 to 49 percent. Particle-size analysis indicated 83 and 69 percent fines at depths of 2 and 4 feet BGS, respectively.

Groundwater was encountered in the hand auger boring at a depth of 7.5 feet BGS. The depth of groundwater may fluctuate in response to seasonal changes, prolonged rainfall, changes in surface topography, and other factors not observed in this study.

INFILTRATION TESTING

Infiltration testing was performed in boring HA-1 at depths of 2 and 4 feet BGS using the encased falling head method and PVC pipe to evaluate the feasibility of on-site stormwater disposal. A representative soil sample was collected below the infiltration test depths for particle-size analysis.

Table 1 summarizes the results of infiltration testing and particle-size analyses. The exploration log and results of particle-size analyses are presented in the Attachment.

Table 1. Infiltration Testing Results

Exploration	Depth (feet BGS)	Soil Description	Percent Fines	Observed Infiltration Rate (inches per hour)
HA-1	2.0	Clay with sand	83	0.9
HA-1	4.0	Sandy clay	69	2.5

As summarized in Table 1, the shallow soil at the site has very low infiltration capacity.

The infiltration rates presented in Table 1 are short-term field rates and factors of safety have not been applied for the type of infiltration system being considered. Correction factors should be applied to the measured infiltration rate to account for soil variations and the potential for long-term clogging due to siltation and buildup of organic material. Without additional testing, from a geotechnical perspective, we recommend a minimum factor of safety of at least 2 be applied to the field infiltration values presented in Table 1 to account for soil variability with depth.

The infiltration flow rate of infiltration systems will diminish over time as suspended solids and precipitates in the stormwater slowly clog the void spaces between the soil particles. Eventually, systems may fail and will need to be replaced or repaired. We recommend that any infiltration system be designed to overflow to a suitable discharge point such as the storm sewer or an acceptable overland release. Finally, stormwater infiltration systems will cause localized high groundwater levels; therefore, they should not be located near basement walls, retaining walls, or other embedded structures unless these are specifically designed to account for the resulting hydrostatic pressure.

LIMITATIONS

We have prepared this report for use by DCI Engineers and members of the design and construction teams for the proposed project. The data and report can be used for bidding or estimating purposes, but our report, conclusions, and interpretations should not be construed as warranty of the subsurface conditions and are not applicable to other nearby building sites.

Exploration observations indicate soil conditions only at specific locations and only to the depths penetrated. They do not necessarily reflect soil strata or water level variations that may exist between exploration locations. If subsurface conditions differing from those described are noted during the course of excavation and construction, re-evaluation will be necessary.

The site development plans and design details were preliminary at the time this report was prepared. When the design has been finalized and if there are changes in the site grades, location, or configuration; design loads; or type of construction, the conclusions and recommendations presented may not be applicable. If design changes are made, we request that we be retained to review our conclusions and recommendations and to provide a written modification or verification if needed.

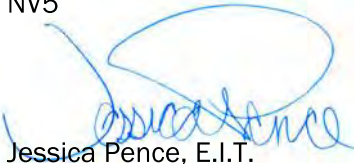
The scope does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in this report for consideration in design.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in this area at the time this report was prepared. No warranty, expressed or implied, should be understood.

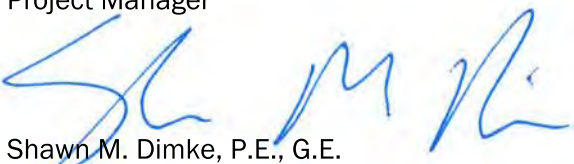
We appreciate the opportunity to be of continued service to you. Please call if you have questions concerning this report or if we can provide additional services.

Sincerely,

NV5



Jessica Pence, E.I.T.
Project Manager



Shawn M. Dimke, P.E., G.E.
Principal Engineer



JJP:SMD:sn

Attachments

One copy submitted

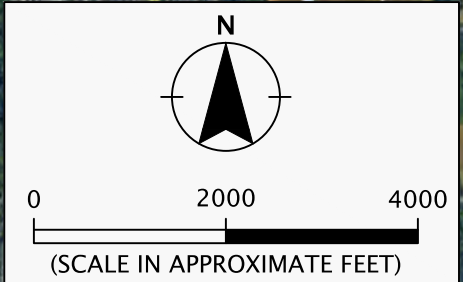
Document ID: DCIEng-4-01-081622-geolr

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FIGURES



VICINITY MAP BASED ON AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH PRO®



Printed By: mmiller | Print Date: 8/8/2022 1:53:28 PM
 File Name: J:\A-D\DCIEng\4\DCIEng-4-01\Figures\CAD\DCIEng-4-01-VM01.dwg | Layout: FIGURE 1

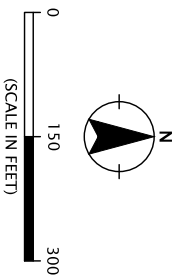
	DCIENG-4-01	VICINITY MAP	
	AUGUST 2022	ESS, INC. PARKING EXPANSION WILSONVILLE, OR	FIGURE 125

Item 2.



LEGEND:
 HA-1 HAND AUGER BORING

SITE PLAN BASED ON AERIAL PHOTOGRAPH DATED
 MAY 10, 2021, OBTAINED FROM GOOGLE EARTH PRO.



DCIENG-4-01
 AUGUST 2022

SITE PLAN
 ESS, INC. PARKING EXPANSION
 WILSONVILLE, OR

FIGURE 2

ATTACHMENT

ATTACHMENT

FIELD EXPLORATIONS

GENERAL

We explored subsurface conditions at the site by advancing one boring (HA-1) with a hand auger to a maximum depth of 9.5 feet BGS. The exploration was conducted on August 2, 2022. The boring log is presented in this attachment.

SOIL SAMPLING

We collected soil samples for geotechnical laboratory testing. Representative disturbed samples of soil observed in the borings were collected from the auger tip. Sampling methods and intervals are shown on the exploration log.

SOIL CLASSIFICATION

The soil samples were classified in the field in accordance with the "Exploration Key" (Table A-1) and "Soil Classification System" (Table A-2), which are presented in this attachment. The exploration log indicates the depths at which the soil characteristics change, although the change actually could be gradual. If the change occurred between sample locations, the depth was interpreted. Classifications are shown on the exploration log.

LABORATORY TESTING

CLASSIFICATION

The soil samples were classified in the laboratory to confirm field classifications. The laboratory classifications are shown on the exploration log, if those classifications differed from the field classifications.

MOISTURE CONTENT

The natural moisture content of select soil samples was determined in general accordance with ASTM D2216. The natural moisture content is a ratio of the weight of the water to dry soil in a test sample and is expressed as a percentage. The test results are presented in this attachment.

PARTICLE-SIZE ANALYSIS

Particle-size analysis was performed on select soil samples in general accordance with ASTM D1140. This test is a quantitative determination of the amount of material finer than the U.S. Standard No. 200 sieve expressed as a percentage of soil weight. The test results are presented in this attachment.

SYMBOL	SAMPLING DESCRIPTION
	Location of sample collected in general accordance with ASTM D1586 using Standard Penetration Test (SPT) with recovery
	Location of sample collected using thin-wall Shelby tube or Geoprobe® sampler in general accordance with ASTM D1587 with recovery
	Location of sample collected using Dames & Moore sampler and 300-pound hammer or pushed with recovery
	Location of sample collected using Dames & Moore sampler and 140-pound hammer or pushed with recovery
	Location of sample collected using 3-inch-outside diameter California split-spoon sampler and 140-pound hammer with recovery
	Location of grab sample
	Rock coring interval
	Water level during drilling
	Water level taken on date shown

Graphic Log of Soil and Rock Types

Observed contact between soil or rock units (at depth indicated)

Inferred contact between soil or rock units (at approximate depths indicated)

GEOTECHNICAL TESTING EXPLANATIONS

ATT	Atterberg Limits	P	Pushed Sample
CBR	California Bearing Ratio	PP	Pocket Penetrometer
CON	Consolidation	P200	Percent Passing U.S. Standard No. 200 Sieve
DD	Dry Density	RES	Resilient Modulus
DS	Direct Shear	SIEV	Sieve Gradation
HYD	Hydrometer Gradation	TOR	Torvane
MC	Moisture Content	UC	Unconfined Compressive Strength
MD	Moisture-Density Relationship	VS	Vane Shear
NP	Non-Plastic	kPa	Kilopascal
OC	Organic Content		

ENVIRONMENTAL TESTING EXPLANATIONS

CA	Sample Submitted for Chemical Analysis	ND	Not Detected
P	Pushed Sample	NS	No Visible Sheen
PID	Photoionization Detector Headspace Analysis	SS	Slight Sheen
ppm	Parts per Million	MS	Moderate Sheen
		HS	Heavy Sheen

RELATIVE DENSITY - COARSE-GRAINED SOIL

Relative Density	Standard Penetration Test (SPT) Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)
Very loose	0 - 4	0 - 11	0 - 4
Loose	4 - 10	11 - 26	4 - 10
Medium dense	10 - 30	26 - 74	10 - 30
Dense	30 - 50	74 - 120	30 - 47
Very dense	More than 50	More than 120	More than 47

CONSISTENCY - FINE-GRAINED SOIL

Consistency	Standard Penetration Test (SPT) Resistance	Dames & Moore Sampler (140-pound hammer)	Dames & Moore Sampler (300-pound hammer)	Unconfined Compressive Strength (tsf)
Very soft	Less than 2	Less than 3	Less than 2	Less than 0.25
Soft	2 - 4	3 - 6	2 - 5	0.25 - 0.50
Medium stiff	4 - 8	6 - 12	5 - 9	0.50 - 1.0
Stiff	8 - 15	12 - 25	9 - 19	1.0 - 2.0
Very stiff	15 - 30	25 - 65	19 - 31	2.0 - 4.0
Hard	More than 30	More than 65	More than 31	More than 4.0

PRIMARY SOIL DIVISIONS

GROUP SYMBOL

GROUP NAME

COARSE-GRAINED SOIL (more than 50% retained on No. 200 sieve)	GRAVEL (more than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (< 5% fines)	GW or GP	GRAVEL	
		GRAVEL WITH FINES (≥ 5% and ≤ 12% fines)	GW-GM or GP-GM	GRAVEL with silt	
			GW-GC or GP-GC	GRAVEL with clay	
		GRAVEL WITH FINES (> 12% fines)	GM	silty GRAVEL	
			GC	clayey GRAVEL	
	SAND (50% or more of coarse fraction passing No. 4 sieve)	CLEAN SAND (<5% fines)	SW or SP	SAND	
		SAND WITH FINES (≥ 5% and ≤ 12% fines)	SW-SM or SP-SM	SAND with silt	
			SW-SC or SP-SC	SAND with clay	
		SAND WITH FINES (> 12% fines)	SM	silty SAND	
			SC	clayey SAND	
FINE-GRAINED SOIL (50% or more passing No. 200 sieve)	SILT AND CLAY Liquid limit less than 50	ML	SILT		
		CL	CLAY		
		CL-ML	silty CLAY		
		OL	ORGANIC SILT or ORGANIC CLAY		
		SILT AND CLAY Liquid limit 50 or greater	MH	SILT	
	CH		CLAY		
	OH		ORGANIC SILT or ORGANIC CLAY		
	HIGHLY ORGANIC SOIL		PT	PEAT	

MOISTURE CLASSIFICATION

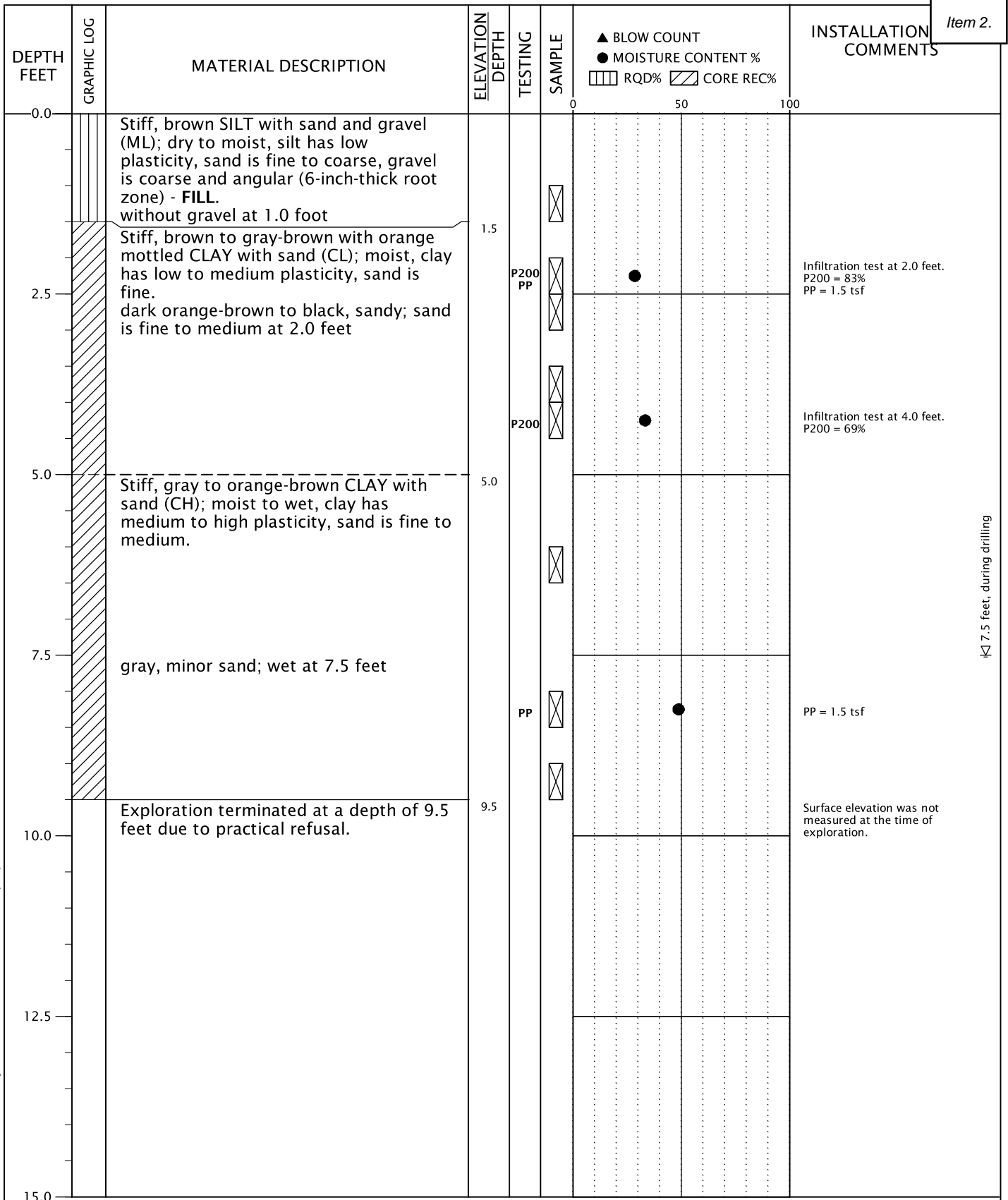
ADDITIONAL CONSTITUENTS

Term	Field Test	Secondary granular components or other materials such as organics, man-made debris, etc.					
		Percent	Silt and Clay In:		Percent	Sand and Gravel In:	
	Fine-Grained Soil		Coarse-Grained Soil			Fine-Grained Soil	Coarse-Grained Soil
dry	very low moisture, dry to touch	< 5	trace	trace	< 5	trace	trace
moist	damp, without visible moisture	5 - 12	minor	with	5 - 15	minor	minor
		> 12	some	silty/clayey	15 - 30	with	with
wet	visible free water, usually saturated				> 30	sandy/gravelly	Indicate %



SOIL CLASSIFICATION SYSTEM

TABLE A-2



7.5 feet, during drilling

BORING LOG - NV5 - 1 PER PAGE DCIENG-4-01-HA1.GPJ GDI_NV5.GDT PRINT DATE: 8/16/22:KT:SN

DRILLED BY: NV5 staff

LOGGED BY: S. Freeman

COMPLETED: 08/02/22

BORING METHOD: hand auger (see document text)

BORING BIT DIAMETER: 6 inches



DCIENG-4-01

BORING HA-1

AUGUST 2022

ESS, INC. PARKING EXPANSION
WILSONVILLE, OR

FIGURE A

SAMPLE INFORMATION			MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	SIEVE			ATTERBERG LIMITS		
EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	ELEVATION (FEET)			GRAVEL (PERCENT)	SAND (PERCENT)	P200 (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
HA-1	2.0		28			83				
HA-1	4.0		33			69				
HA-1	8.0		49							

LAB SUMMARY - GDI-NV5 DCIENG-4-01-HA1.GPJ GDI_NV5.GDT PRINT DATE: 8/10/22:SN

	DCIENG-4-01	SUMMARY OF LABORATORY DATA	
	AUGUST 2022	ESS, INC. PARKING EXPANSION WILSONVILLE, OR	FIGURE A

Exhibit C1
Public Works Plan Submittal Requirements
and Other Engineering Requirements

1. All construction or improvements to public works facilities shall be in conformance to the City of Wilsonville Public Works Standards - 2017.
2. Applicant shall submit insurance requirements to the City of Wilsonville in the following amounts:

Coverage (<i>Aggregate, accept where noted</i>)	Limit
<u>Commercial General Liability:</u>	
▪ General Aggregate (per project)	\$3,000,000
▪ General Aggregate (per occurrence)	\$2,000,000
▪ Fire Damage (any one fire)	\$50,000
▪ Medical Expense (any one person)	\$10,000
<u>Business Automobile Liability Insurance:</u>	
▪ Each Occurrence	\$1,000,000
▪ Aggregate	\$2,000,000
<u>Workers Compensation Insurance</u>	\$500,000

3. No construction of, or connection to, any existing or proposed public utility/improvements will be permitted until all plans are approved by Staff, all fees have been paid, all necessary permits, right-of-way and easements have been obtained and Staff is notified a minimum of 24 hours in advance.
4. All public utility/improvement plans submitted for review shall be based upon a 22" x 34" format and shall be prepared in accordance with the City of Wilsonville Public Work's Standards.
5. Plans submitted for review shall meet the following general criteria:
 - a. Utility improvements that shall be maintained by the public and are not contained within a public right-of-way shall be provided a maintenance access acceptable to the City. The public utility improvements shall be centered in a minimum 15-ft. wide public easement for single utilities and a minimum 20-ft wide public easement for two parallel utilities and shall be conveyed to the City on its dedication forms.
 - b. Design of any public utility improvements shall be approved at the time of the issuance of a Public Works Permit. Private utility improvements are subject to review and approval by the City Building Department.
 - c. In the plan set for the PW Permit, existing utilities and features, and proposed new private utilities shall be shown in a lighter, grey print. Proposed public improvements shall be shown in bolder, black print.

- d. All elevations on design plans and record drawings shall be based on NAVD 88 Datum.
 - e. All proposed on and off-site public/private utility improvements shall comply with the State of Oregon and the City of Wilsonville requirements and any other applicable codes.
 - f. Design plans shall identify locations for street lighting, gas service, power lines, telephone poles, cable television, mailboxes and any other public or private utility within the general construction area.
 - g. As per City of Wilsonville Ordinance No. 615, all new gas, telephone, cable, fiber-optic and electric improvements etc. shall be installed underground. Existing overhead utilities shall be undergrounded wherever reasonably possible.
 - h. Any final site landscaping and signing shall not impede any proposed or existing driveway or interior maneuvering sight distance.
 - i. Erosion Control Plan that conforms to City of Wilsonville Ordinance No. 482.
 - j. Existing/proposed right-of-way, easements and adjacent driveways shall be identified.
 - k. All engineering plans shall be printed to PDF, combined to a single file, stamped and digitally signed by a Professional Engineer registered in the State of Oregon.
 - l. All plans submitted for review shall be in sets of a digitally signed PDF and three printed sets.
6. Submit plans in the following general format and order for all public works construction to be maintained by the City:
- a. Cover sheet
 - b. City of Wilsonville construction note sheet
 - c. Land Use Conditions of Approval sheet
 - d. General construction note sheet
 - e. Existing conditions plan.
 - f. Erosion control and tree protection plan.
 - g. Site plan. Include property line boundaries, water quality pond boundaries, sidewalk improvements, right-of-way (existing/proposed), easements (existing/proposed), and sidewalk and road connections to adjoining properties.
 - h. Grading plan, with 1-foot contours.
 - i. Composite utility plan; identify storm, sanitary, and water lines; identify storm and sanitary manholes.
 - j. Detailed plans; show plan view and either profile view or provide i.e.'s at all utility crossings; include laterals in profile view or provide table with i.e.'s at crossings; vertical scale 1"= 5', horizontal scale 1"= 20' or 1"= 30'.
 - k. Street plans.
 - l. Storm sewer/drainage plans; number all lines, manholes, catch basins, and cleanouts for easier reference.
 - m. Stormwater LIDA facilities (Low Impact Development): provide plan and profile views of all LIDA facilities.
 - n. Water and sanitary sewer plans; plan; number all lines, manholes, and cleanouts for easier reference.

- o. Where depth of water mains are designed deeper than the 3-foot minimum (to clear other pipe lines or obstructions), the design engineer shall add the required depth information to the plan sheets.
 - p. Detailed plan for storm water detention facility (both plan and profile views), including water quality orifice diameter and manhole rim elevations. Provide detail of inlet structure and energy dissipation device. Provide details of drain inlets, structures, and piping for outfall structure. Note that although storm water detention facilities are typically privately maintained they will be inspected by engineering, and the plans must be part of the Public Works Permit set.
 - q. Detailed plan for water quality facility (both plan and profile views). Note that although storm water quality facilities are typically privately maintained they will be inspected by Natural Resources, and the plans must be part of the Public Works Permit set.
 - r. Composite franchise utility plan.
 - s. City of Wilsonville detail drawings.
 - t. Illumination plan.
 - u. Striping and signage plan.
 - v. Landscape plan.
7. Design engineer shall coordinate with the City in numbering the sanitary and stormwater sewer systems to reflect the City's numbering system. Video testing and sanitary manhole testing will refer to City's numbering system.
 8. The applicant shall install, operate and maintain adequate erosion control measures in conformance with the standards adopted by the City of Wilsonville Ordinance No. 482 during the construction of any public/private utility and building improvements until such time as approved permanent vegetative materials have been installed.
 9. Applicant shall work with City Engineering before disturbing any soil on the respective site. If 5 or more acres of the site will be disturbed applicant shall obtain a 1200-C permit from the Oregon Department of Environmental Quality. If 1 to less than 5 acres of the site will be disturbed a 1200-CN permit from the City of Wilsonville is required.
 10. The applicant shall be in conformance with all stormwater and flow control requirements for the proposed development per the Public Works Standards.
 11. A storm water analysis prepared by a Professional Engineer registered in the State of Oregon shall be submitted for review and approval by the City.
 12. The applicant shall be in conformance with all water quality requirements for the proposed development per the Public Works Standards. If a mechanical water quality system is used, prior to City acceptance of the project the applicant shall provide a letter from the system manufacturer stating that the system was installed per specifications and is functioning as designed.

13. Storm water quality facilities shall have approved landscape planted and/or some other erosion control method installed and approved by the City of Wilsonville prior to paving.
14. The applicant shall contact the Oregon Water Resources Department and inform them of any existing wells located on the subject site. Any existing well shall be limited to irrigation purposes only. Proper separation, in conformance with applicable State standards, shall be maintained between irrigation systems, public water systems, and public sanitary systems. Should the project abandon any existing wells, they shall be properly abandoned in conformance with State standards.
15. All survey monuments on the subject site, or that may be subject to disturbance within the construction area, or the construction of any off-site improvements shall be adequately referenced and protected prior to commencement of any construction activity. If the survey monuments are disturbed, moved, relocated or destroyed as a result of any construction, the project shall, at its cost, retain the services of a registered professional land surveyor in the State of Oregon to restore the monument to its original condition and file the necessary surveys as required by Oregon State law. A copy of any recorded survey shall be submitted to Staff.
16. Streetlights shall be in compliance with City dark sky, LED, and PGE Option C requirements.
17. Sidewalks, crosswalks and pedestrian linkages in the public right-of-way shall be in compliance with the requirements of the U.S. Access Board.
18. No surcharging of sanitary or storm water manholes is allowed.
19. The project shall connect to an existing manhole or install a manhole at each connection point to the public storm system and sanitary sewer system.
20. A City approved energy dissipation device shall be installed at all proposed storm system outfalls. Storm outfall facilities shall be designed and constructed in conformance with the Public Works Standards.
21. The applicant shall provide a 'stamped' engineering plan and supporting information that shows the proposed street light locations meet the appropriate AASHTO lighting standards for all proposed streets and pedestrian alleyways.
22. All required pavement markings, in conformance with the Transportation Systems Plan and the Bike and Pedestrian Master Plan, shall be completed in conjunction with any conditioned street improvements.
23. Street and traffic signs shall have a hi-intensity prismatic finish meeting ASTM 4956 Spec Type 4 standards.

24. The applicant shall provide adequate sight distance at all project driveways by driveway placement or vegetation control. Specific designs to be submitted and approved by the City Engineer. Coordinate and align proposed driveways with driveways on the opposite side of the proposed project site.
25. The applicant shall provide adequate sight distance at all project street intersections, alley intersections and commercial driveways by properly designing intersection alignments, establishing set-backs, driveway placement and/or vegetation control. Coordinate and align proposed streets, alleys and commercial driveways with existing streets, alleys and commercial driveways located on the opposite side of the proposed project site existing roadways. Specific designs shall be approved by a Professional Engineer registered in the State of Oregon. As part of project acceptance by the City the Applicant shall have the sight distance at all project intersections, alley intersections and commercial driveways verified and approved by a Professional Engineer registered in the State of Oregon, with the approval(s) submitted to the City (on City approved forms).
26. Access requirements, including sight distance, shall conform to the City's Transportation Systems Plan (TSP) or as approved by the City Engineer. Landscaping plantings shall be low enough to provide adequate sight distance at all street intersections and alley/street intersections.
27. Applicant shall design interior streets and alleys to meet specifications of Tualatin Valley Fire & Rescue and Allied Waste Management (United Disposal) for access and use of their vehicles.
28. The applicant shall provide the City with a Stormwater Maintenance and Access Easement Agreement (on City approved forms) for City inspection of those portions of the storm system to be privately maintained. Applicant shall provide City with a map exhibit showing the location of all stormwater facilities which will be maintained by the Applicant or designee. Stormwater or rainwater LID facilities may be located within the public right-of-way upon approval of the City Engineer. Applicant shall maintain all LID storm water components and private conventional storm water facilities; maintenance shall transfer to the respective homeowners association when it is formed.
29. The applicant shall "loop" proposed waterlines by connecting to the existing City waterlines where applicable.
30. Applicant shall provide a minimum 6-foot Public Utility Easement on lot frontages to all public right-of-ways. An 8-foot PUE shall be provided along Collectors. A 10-ft PUE shall be provided along Minor and Major Arterials.
31. For any new public easements created with the project the Applicant shall be required to produce the specific survey exhibits establishing the easement and shall provide the City with the appropriate Easement document (on City approved forms).

32. Mylar Record Drawings:

At the completion of the installation of any required public improvements, and before a 'punch list' inspection is scheduled, the Engineer shall perform a record survey. Said survey shall be the basis for the preparation of 'record drawings' which will serve as the physical record of those changes made to the plans and/or specifications, originally approved by Staff, that occurred during construction. Using the record survey as a guide, the appropriate changes will be made to the construction plans and/or specifications and a complete revised 'set' shall be submitted. The 'set' shall consist of drawings on 3 mil. Mylar and an electronic copy in AutoCAD, current version, and a digitally signed PDF.



Planning Division Development Permit Application

Final action on development application or zone change is required within 120 days in accordance with provisions of ORS 227.175

A pre application conference is normally required prior to submittal of an application. Please visit the City's website for submittal requirements

Pre-Application Meeting Date: 06.09.2022

Incomplete applications will not be scheduled for public hearing until all of the required materials are submitted.

29799 SW Town Center Loop E, Wilsonville, OR 97070
Phone: 503.682.4960 Fax: 503.682.7025
Web: www.ci.wilsonville.or.us

Applicant:

Name: Desmond Amper
Company: LRS Architects
Mailing Address: 720 NW Davis St # 300
City, State, Zip: Portland, OR 97209
Phone: (503) 221-1121 Fax: _____
E-mail: damper@lrsarchitects.com

Authorized Representative:

Name: _____
Company: _____
Mailing Address: _____
City, State, Zip: _____
Phone: _____ Fax: _____
E-mail: _____

Property Owner:

Name: Parkway Woods, LLC
Company: Bill Naito Company
Mailing Address: PO Box 2050
City, State, Zip: White Salmon, WA 98672
Phone: 5038033956 Fax: _____
E-mail: dmcMahon@billnaito.com

Property Owner's Signature:

Diane McMahon, Authorized Agent
Printed Name: Diane McMahon Date: 6.30.22

Applicant's Signature: (if different from Property Owner)

Printed Name: _____ Date: _____

Site Location and Description:

Project Address if Available: 26440 SW Parkway Ave, WILSONVILLE, OR 97070 Suite/Unit _____
Project Location: East of SW parkway Ave and North of Printer parkway
Tax Map #(s): 31W12 Tax Lot #(s): 00512 County: Washington Clackamas

Request:

Add an additional 85 parking stalls ~10,820 sf of new asphalt to an existing developed site. New Parking stalls to be 9'-0" x 18'-0". Replace existing loading dock with new truck/loading ramp.

Project Type: Class I Class II Class III

Residential Commercial Industrial Other: _____

Application Type(s):

- | | | | |
|--|---|--|---|
| <input type="checkbox"/> Annexation | <input type="checkbox"/> Appeal | <input type="checkbox"/> Comp Plan Map Amend | <input type="checkbox"/> Parks Plan Review |
| <input type="checkbox"/> Final Plat | <input type="checkbox"/> Major Partition | <input type="checkbox"/> Minor Partition | <input type="checkbox"/> Request to Modify Conditions |
| <input type="checkbox"/> Plan Amendment | <input type="checkbox"/> Planned Development | <input type="checkbox"/> Preliminary Plat | <input checked="" type="checkbox"/> Site Design Review |
| <input type="checkbox"/> Request for Special Meeting | <input type="checkbox"/> Request for Time Extension | <input type="checkbox"/> Signs | <input checked="" type="checkbox"/> Stage II Final Plan |
| <input type="checkbox"/> SROZ/SRIR Review | <input type="checkbox"/> Staff Interpretation | <input type="checkbox"/> Stage I Master Plan | <input type="checkbox"/> Variance |
| <input type="checkbox"/> Type C Tree Removal Plan | <input type="checkbox"/> Tree Permit (B or C) | <input type="checkbox"/> Temporary Use | <input type="checkbox"/> Other (describe) |
| <input type="checkbox"/> Villebois SAP | <input type="checkbox"/> Villebois PDP | <input type="checkbox"/> Villebois FDP | |
| <input type="checkbox"/> Zone Map Amendment | <input type="checkbox"/> Waiver(s) | <input type="checkbox"/> Conditional Use | |





PROPERTY OWNER
ACKNOWLEDGEMENT FORM

By signing below, I certify that I am the property owner for the application in question and that the applicant, Desmond Amper, has my permission to submit this application for the property located at:

Site Address: 26440 SW Parkway Ave, WILSONVILLE, OR 97070

Tax Lot(s): 31W12 00512 Section: 5033712

I understand the application will not be deemed complete without this documentation. I understand that submittal of this application does not entitle the applicant to engage in the work applied for until such an application is approved, the plan approval is issued, and the specified appeal period has passed. I also understand that all work must be performed in compliance with all applicable state, federal, and local laws, ordinances and regulations.

Property Owner's Signature:

Diane R McMahon, Authorized Agent

Printed Name: Diane R McMahon Date: 6.29.22

Property Owner Contact Information:

Company (if applicable): _____

Mailing Address: _____

City, State, Zip: _____

Phone: _____ E-mail: _____

DECEMBER 15, 2022

ESS WILSONVILLE EXTERIOR SITE
IMPROVEMENTS
WILSONVILLE, OREGON

An Application For:

Site Design Review
Stage II Final Plan Modification

Applicant:

Parkway Woods, LLC
PO Box 2050
White Salmon, WA 98672
Phone: 503.803.3956
Contact: Diane McMahon

Prepared By:

LRS Architects
720 NW Davis St. Suite 300
Portland, OR 97209
Phone: 503.221.1121
Contact: Desmond Amper

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TABLE OF CONTENTS

I. INTRODUCTION.....05

Summary of Proposal06

Background Information.....07

II. WILLSONVILLE ZONING CODE – CHAPTER 4 (Applicable Development Code Sections)

ZONING.....08

 Section 4.117 Standards Applying to Industrial Developments in any Zone

 Section 4.118 Standards Applying to all Planned Development Zones

 Section 4.135 PDI–Planned Development Industrial Zone

 Section 4.139 – 4.139.11 Significant Resource Overlay Zone (SROZ) Ordinance

 Section 4.140 Planned Development Regulations

GENERAL DEVELOPMENT REGULATIONS AND STANDARDS.....11

 Section 4.154 On-Site Pedestrian Access and Circulation

 Section 4.155 Parking, Loading, and Bicycle Parking

 Section 4.171 Protection of Natural and Other Features: Section

 Section 4.175 Public Safety and Crime Prevention

 Section 4.176 Landscaping, Screening, and Buffering

 Section 4.199 – 4.199.60 Outdoor Lighting

 Section 4.300 – 4.320 Underground Utilities

SITE DESIGN REVIEW19

 Section 4.400 – 4.450 Site Design Review

TREE REMOVAL.....22

 Section 4.600 – 4.640.20 Tree Preservation and Protection

CONCLUSION.....22

EXHIBITS

EXHIBIT A DEVELOPMENT REVIEW APPLICATIONS

- Site Design Review
- Stage II Final Plan Modification

EXHIBIT B SITE DESIGN REVIEW PLAN SET

- Civil Plan Site Plan
- Civil Enlarged Site Plan

EXHIBIT C TAX MAP & TITLE REPORT

EXHIBIT D STORMWATER REPORT

EXHIBIT E INFILTRATION REPORT

INTRODUCTIONS

Applicant: ESS Tech, Inc
26440 SW Parkway Ave
Wilsonville, OR 97070
Phone: 971.235.7181
Contact: James Handley

Property Owner: Parkway Woods, LLC
PO Box 2050
White Salmon, WA 98672

Applicant's Representative: LRS Architects
720 NW Davis St. Suite 300
Portland, OR 97209
Phone: 503.221.1121
Contact: Desmond Amper
damper@lrsarchitects.com

Tax Lot information: 31W12 00513

Location: 26440 SW Parkway Ave, Wilsonville, OR 97070

Zoning District: Planned Development Industrial (PDI)

SUMMARY OF PROPOSAL

The applicant is seeking Development review approval to help resolve staff parking needs. The site for the proposal is located at 26440 SW Parkway Ave in the City of Wilsonville. This intent of this proposal is to create an additional (83) parking stalls by adding new asphalt for parking (new impervious area) = 10,650 sf. Along with the addition of the new parking stalls, the proposal will remove the existing basketball hoops (2) and restripe the court to restore (18) parking stalls to previous conditions as stated during the pre-application conference held on June 9th, 2022. The site is a developed site zoned for PDI, the existing building is a 205,100 sf industrial electronics manufacturing/warehouse building with an occupancy of B, F-1, and S-1. The proposal also includes the converting of an existing loading dock into an at-grade bay door by constructing a new access ramp for an 10'-0" unobstructed interior transfer area to meet the standards of PW Section 301.12.11. The new access ramp will consist of 105 sf of new concrete and 855 sf of redeveloped concrete as shown in Exhibit B.

The site is located in the Planned Development Industrial zone. Based on the conversation with the City Staff at the pre-application conference held on June 9th, 2022, the proposed modifications are subject to a Design Review, which requires a Development Review Board public hearing and decision. A discussion of all applicable design review provisions is provided in this narrative.

SURROUNDING USES

Table A: SURROUNDING LAND USE

Location	Zoning Designation	Land Use
North	Future Development Agricultural Holding Industrial (FDAHI) Planned Development Industrial (PDI)	----- Sysco Portland - Wholesale Restaurant Food Supplies
South	Planned Development Industrial (PDI)	Dealer Spoke / 3D systems
East	Planned Development Industrial (PDI)	-----
West	-----	Interstate 5 ROW

Figure 1: Tax Lot ID - 31W12 00512



Figure 2: Zoning Designation - PDI



Zoning

Section 4.117. - Standards Applying to Industrial Developments in any Zone

- (.01) All industrial developments, uses, or activities are subject to performance standards. If not otherwise specified in the Planning and Development Code, industrial developments, uses, and activities shall be subject to the performance standards specified in Section 4. 135 (.05) (PDI Zone).**

Response: The applicant is proposing to modify the existing site to add (83) additional parking stalls. The current number of parking stalls provided (162) does not meet the minimum number of parking stalls (261) required as stated in section 4.155 Table 5: Parking Standards. With the additional (83) parking stalls and the reclaimed (18) parking stalls the total provided parking stalls would be (263) stalls as shown on exhibit B.

Section 4.118. - Standards Applying to all Planned Development Zones.

- (.02) Underground Utilities shall be governed by Sections 4.300 to 4.320. All utilities above ground shall be located so as to minimize adverse impacts on the site and neighboring properties.**

Response: As shown on exhibit B, all utilities are shown underground to minimize adverse impacts on the site and adjacent properties.

- (.03) Notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purposes and objectives of Section 4.140, and based on findings of fact supported by the record may:**

A. Waive the following typical development standards:

1. Minimum lot area;
2. Lot width and frontage;
3. Height and yard requirements;
4. Lot coverage;
5. Lot depth;
6. Street widths;
7. Sidewalk requirements;
8. Height of buildings other than signs;
9. Parking space configuration and drive aisle design;
10. Minimum number of parking or loading spaces;
11. Shade tree islands in parking lots, provided that alternative shading is provided;
12. Fence height;
13. Architectural design standards;
14. Transit facilities;

- 15. On-site pedestrian access and circulation standards;
- 16. Solar access standards, as provided in section 4.137;
- 17. Open space in the Residential Neighborhood zone; and
- 18. Lot orientation.

Response: As noted in the responses in this narrative and the attached proposed plans, the development standards noted above are either already been met or will be met with this proposed project.

B. The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:

- 1. Open space requirements in residential areas
- 2. Minimum density standards of residential zones
- 3. Minimum landscape, buffering, and screening standards

Response: The proposal is not requesting a variance or waiver to the standards outlined with this section. All proposed landscaping, buffering, and screening standards meet the minimum development code standards.

C. The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:

- 1. Maximum number of parking spaces;
- 2. Standards for mitigation of trees that are removed;
- 3. Standards for mitigation of wetlands that are filled or damaged; and
- 4. Trails or pathways shown in the Parks and Recreation Master Plan.

Response: The proposal is not requesting a variance or waiver to the standards outlined with this section. All proposed parking will meet the minimum standards of the development code. No trees in the project scope will be removed and no wetlands are within the project scope area.

D. Locate individual building, accessory buildings, off-street parking and loading facilities, open space and landscaping and screening without reference to lot lines; and

Response: The proposed off-street parking and landscaping have been oriented to appropriately consider the context of the site and its surroundings.

- E. Adopt other requirements or restrictions, inclusive of, but not limited to, the following, except that no additional requirements or restrictions can conflict with established clear and objective standards for residential development or be grounds for denying a residential development proposal when the applicant has selected the clear and objective path for approval...**

Response: The existing development of this site addresses the compliance with the standards of this sections. The proposed new parking stalls and striped pedestrian path are in compliance with these standards.

Section 4.135. - PDI—Planned Development Industrial Zone

(.03) Uses that are typically permitted:

Response: The existing development on the site is an industrial electronics manufacturing/warehouse building and as noted in section 4.135, such development is permitted. The proposal of this scope of work is to provide additional parking stalls to meet the required parking minimums as stated throughout this narrative.

(.04) Block and access standards. The PDI zone shall be subject to the same block and access standards as the PDC zone, Section 4.131(.02) and (.03).

Response: The existing development on the site currently meet the standard set in the section. The proposed scope of work, does not affect the requirements of these standards.

(.05) Performance Standards. The following performance standards apply to all industrial properties and sites within the PDI Zone, and are intended to minimize the potential adverse impacts of industrial activities on the general public and on other land uses or activities. They are not intended to prevent conflicts between different uses or activities that may occur on the same property.

Response: The existing development on the site currently meet the performance standard set in the section. The proposed scope of work, does not affect the requirements of these standards.

(.06) Other Standards:

G. Off-Street Parking and Loading: As provided in Section 4.155.

Response: The proposal of this scope of work is to provide additional parking stalls to meet the required parking minimums as stated throughout this narrative and as shown on exhibit B.

Section 4.139.00. - Significant Resource Overlay Zone (SROZ) Ordinance

Section 4.139.02. - Where these Regulations Apply.

The regulations of this Section apply to the portion of any lot or development site, which is within a Significant Resource Overlay Zone and its associated "Impact Areas".

Response: Per exhibit B, the proposed new parking stalls and additional AC pavement does not fall within a SROZ zone and does not encroach into the 25'-0" impact area. Please see site details on Exhibit B.

Section 4.140. - Planned Development Regulations

(.03) Ownership:

A. The tract or tracts of land included in a proposed Planned Development must be in one (1) ownership or control or the subject of a joint application by the owners of all the property included. The holder of a written option to purchase, with written authorization by the owner to make applications, shall be deemed the owner of such land for the purposes of Section 4.140.

Response: Ownership of the land where the proposed scope of work is located is as stated on Exhibits A and C .

(.04) Professional Design:

A. The applicant for all proposed Planned Developments shall certify that the professional services of the appropriate professionals have been utilized in the planning process for development.

Response: The applicant has retained licensed professional design team that consist of LRS Architects and DCI Engineersaw.

(.05) Planned Development Permit Process:

Response: Per the Pre-Application conference held on June 9th, 2022 the proposal requires an application for Modified stage II review and Site Design review by the DRB. The proposed design described in this narrative and attached exhibits outlines how the project scope meet the required development standards.

General Development Regulation and Standards

Section 4.154. - On-site Pedestrian Access and Circulation

(.03) On-site Pedestrian Access and Circulation:

B. Standards. Development shall conform to all of the following standards:

- 1. Continuous Pathway System. A pedestrian pathway system shall extend throughout the development site and connect to adjacent sidewalks, and to all future phases of the development, as applicable.**

2. Safe, Direct, and Convenient. Pathways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas/playgrounds, and public rights-of-way and crosswalks based on all of the following criteria:

- a. Pedestrian pathways are designed primarily for pedestrian safety and convenience, meaning they are free from hazards and provide a reasonably smooth and consistent surface.
 - b. The pathway is reasonably direct. A pathway is reasonably direct when it follows a route between destinations that does not involve a significant amount of unnecessary out-of-direction travel.
 - c. The pathway connects to all primary building entrances and is consistent with the Americans with Disabilities Act (ADA) requirements.
 - d. All parking lots larger than three acres in size shall provide an internal bicycle and pedestrian pathway pursuant to Section 4.155(.03)B.3.d.
- 3. Vehicle/Pathway Separation.** Except as required for crosswalks, per subsection 4, below, where a pathway abuts a driveway or street it shall be vertically or horizontally separated from the vehicular lane. For example, a pathway may be vertically raised six inches above the abutting travel lane, or horizontally separated by a row of bollards.
- 4. Crosswalks.** Where a pathway crosses a parking area or driveway, it shall be clearly marked with contrasting paint or paving materials (e.g., pavers, light-color concrete inlay between asphalt, or similar contrast).
- 5. Pathway Width and Surface.** Primary pathways shall be constructed of concrete, asphalt, brick/masonry pavers, or other durable surface, and not less than five feet wide. Secondary pathways and pedestrian trails may have an alternative surface except as otherwise required by the ADA.
- 6. All pathways shall be clearly marked with appropriate standard signs.**

Response: As shown in the site plan per Exhibit B, a new pedestrian striped cross walk and accessible route is provided from the new proposed parking stalls to an accessible entry on the north side of the building.

Section 4.155. - General Regulations—Parking, Loading and Bicycle Parking

(.01) Purpose:

- A. The design of parking areas is intended to enhance the use of the parking area as it relates to the site development as a whole, while providing efficient parking, vehicle circulation and attractive, safe pedestrian access.**

- B. As much as possible, site design of impervious surface parking and loading areas shall address the environmental impacts of air and water pollution, as well as climate change from heat islands.**
- C. The view from the public right-of-way and adjoining properties is critical to meet the aesthetic concerns of the community and to ensure that private property rights are met. Where developments are located in key locations such as near or adjacent to the I-5 interchanges, or involve large expanses of asphalt, they deserve community concern and attention.**

Response: The design and location of the new addition of (83) parking stalls and I located at the “rear” of the lot. The addition of the (83) new stalls will help to bring the site into compliance with the minimum required parking as stated in section 4.155 Table 5: Parking Standards. As shown in Exhibit B, a landscape buffer along the front of the new parking stalls along with new parking lot trees will be provided. Stormwater treatment and detention swales will be installed to address stormwater pollution and detention standards.

(.02) General Provisions:

- A. The provision and maintenance of off-street parking spaces is a continuing obligation of the property owner. The standards set forth herein shall be considered by the Development Review Board as minimum criteria.**
 - 1. The Board shall have the authority to grant variances or planned development waivers to these standards in keeping with the purposes and objectives set forth in the Comprehensive Plan and this Code.**
 - 2. Waivers to the parking, loading, or bicycle parking standards shall only be issued upon a finding that the resulting development will have no significant adverse impact on the surrounding neighborhood, and the community, and that the development considered as a whole meets the purposes of this section.**

Response: The provisions and maintenance of the proposed off-street parking spaces is an obligation of the property owner. There are no variances or waivers to the parking standards as defined within the development code.

- B. No area shall be considered a parking space unless it can be shown that the area is accessible and usable for that purpose, and has maneuvering area for the vehicles, as determined by the Planning Director.**

Response: All new proposed parking stalls are surfaced with asphalt and accessible via existing driveway and drive aisle as shown in Exhibit B.

- C. In cases of enlargement of a building or a change of use from that existing on the effective date of this Code, the number of parking spaces required shall be based on the additional floor area of the enlarged or additional building, or changed use, as set forth in this Section. Current development standards, including parking area landscaping and screening, shall apply only to the additional approved parking area.**

Response: Any proposed enlargement of a building or change of use will require an update to the parking stall count for the site. Current development standards will only apply to the additional approved parking area.

- D. In the event several uses occupy a single structure or parcel of land, the total requirement for off-street parking shall be the sum of the requirements of the several uses computed separately, except as modified by subsection "E," below**

Response: The total sum of the existing building occupancy uses have been used to determine the off-street parking minimum requirements. The addition of the (83) new stalls will help to bring the site into compliance with the minimum required parking as stated in section 4.155 Table 5: Parking Standards.

- K. All areas used for parking and maneuvering of cars shall be surfaced with asphalt, concrete, or other surface, such as pervious materials (i. e. pavers, concrete, asphalt) that is found by the City's authorized representative to be suitable for the purpose. In all cases, suitable drainage, meeting standards set by the City's authorized representative shall be provided.**

Response: The proposed new stalls are surfaced with asphalt and is accessible via existing driveway and drive aisles. Stormwater drainage for the added impervious surfaces are addressed in the stormwater report Exhibit D.

- N. Up to 40 percent of the off-street spaces may be compact car spaces as identified in Section 4.001 - "Definitions," and shall be appropriately identified.**

Response: The proposed (4) new stalls shall be compact size (8'x15') and (79) new stalls will be standard size as shown on the site plans Exhibit B.

(.03) Minimum and Maximum Off-Street Parking Requirements:

- A. Parking and loading or delivery areas shall be designed with access and maneuvering area adequate to serve the functional needs of the site and shall:**
- 1. Separate loading and delivery areas and circulation from customer and/or employee parking and pedestrian areas. Circulation patterns shall be clearly marked.**
 - 2. To the greatest extent possible, separate vehicle and pedestrian traffic.**

Response: All new proposed parking stalls are designed to meet the City of Wilsonville dimensional requirements and shall have a striped pedestrian path in compliance with these standards.

- B. Parking areas over 650 square feet, excluding access areas, and loading or delivery areas shall be landscaped to minimize the visual dominance of the parking or loading area, as follows:**
- 1. Landscaping of at least ten percent of the parking area designed to be screened from view from the public right-of-way and adjacent properties. This landscaping shall be considered to be part of the 15 percent total landscaping required in Section 4.176.03 for the site development.**
 - 2. Landscape tree planting areas shall be a minimum of eight feet in width and length and spaced every eight parking spaces or an equivalent aggregated amount.**
 - a. Trees shall be planted in a ratio of one tree per eight parking spaces or fraction thereof, except in parking areas of more than 200 spaces where a ratio of one tree per six spaces shall be applied as noted in subsection [4.155](.03)B.3. A landscape design that includes trees planted in areas based on an aggregated number of parking spaces must provide all area calculations.**
 - b. Except for trees planted for screening, all deciduous interior parking lot trees must be suitably sized, located, and maintained to provide a branching minimum of seven feet clearance at maturity.**

Response: All new proposed parking stalls shall meet the landscaping requirements of this standards with (1) tree per (8) new parking stalls as shown on the site plan Exhibit B.

- C. Off Street Parking shall be designed for safe and convenient access that meets ADA and ODOT standards. All parking areas which contain ten (10) or more parking spaces, shall for every 50 standard spaces., provide one ADA-accessible parking space that is constructed to building code standards, Wilsonville Code 9.000.**

Response: All new proposed parking stalls are designed to meet the ADA and ODOT requirements. There are a total of (83) new parking stalls. (2) New ADA stalls are required. As shown on the site plan 3 standard ADA stalls and 1 Van ADA stall shall be provided. Per Exhibit B

G. Tables 5 shall be used to determine the minimum and maximum parking standards for various land uses. The minimum number of required parking spaces shown on Tables 5 shall be determined by rounding to the nearest whole parking space. For example, a use containing 500 square feet, in an area where the standard is one space for each 400 square feet of floor area, is required to provide one off-street parking space. If the same use contained more than 600 square feet, a second parking space would be required. Structured parking and on-street parking are exempted from the parking maximums in Table 5.

Response: Per section 4.155 Table 5: Parking Standards, the existing number of parking stalls provided (162) does not meet the minimum number of parking stalls (261) required. With the additional (83) parking stalls and the reclaimed (18) parking stalls the total provided parking stalls of (263) stalls as shown on exhibit B would exceed the minimum parking required.

Use	Parking Minimums	Parking Maximums	Bicycle Minimums
f. Industrial			
1. Manufacturing establishment	1.67 per 1000 sq. ft.	No Limit	1 per 10,000 sq. ft. Min. of 6
2. Storage warehouse, wholesale establishment, rail or trucking freight terminal	.3 per 1,000 sq. ft.	.5 per 1,000 sq. ft.	1 per 20,000 sq. ft. Min. of 2

Section 4.171. - General Regulations—Protection of Natural Features and Other Resources

(.01) Purpose. It is the purpose of this Section to prescribe standards and procedures for the use and development of land to assure the protection of valued natural features and cultural resources. The requirements of this Section are intended to be used in conjunction with those of the Comprehensive Plan and other zoning standards. It is further the purpose of this Section:

A. To protect the natural environmental and scenic features of the City of Wilsonville.

B. To encourage site planning and development practices which protect and enhance natural features such as riparian corridors, streams, wetlands, swales, ridges, rock outcroppings, views, large trees and wooded areas

C. To provide ample open space and to create a constructed environment capable and harmonious with the natural environment.

Response: The proposed work will meet the standards of this section and propose to use vegetated swales as shown on the site plans Exhibit B.

Section 4.175. - Public Safety and Crime Prevention

(.03) Areas vulnerable to crime shall be designed to allow surveillance. Parking and loading areas shall be designed for access by police in the course of routine patrol duties.

Response: New proposed parking area is accessible by police via existing driveway and drive aisles as shown on the site plans.

(.04) Exterior lighting shall be designed and oriented to discourage crime.

Response: Existing site lights have been previously installed and upgraded and are noted to remain as shown on the site plans Exhibit B.

Section 4.176. - Landscaping, Screening, and Buffering.

C. General Landscaping Standard:

1. **Intent. The General Landscaping Standard is a landscape treatment for areas that are generally open. It is intended to be applied in situations where distance is used as the principal means of separating uses or developments and landscaping is required to enhance the intervening space. Landscaping may include a mixture of ground cover, evergreen and deciduous shrubs, and coniferous and deciduous trees.**
2. **Required materials. Shrubs and trees, other than street trees, may be grouped. Ground cover plants must fully cover the remainder of the landscaped area (see Figure 21: General Landscaping). The General Landscaping Standard has two different requirements for trees and shrubs:**
 - a. **Where the landscaped area is less than 30 feet deep, one tree is required for every 30 linear feet.**
 - b. **Where the landscaped area is 30 feet deep or greater, one tree is required for every 800 square feet and two high shrubs or three low shrubs are required for every 400 square feet.**

Response: The new proposed parking stalls will have a landscape buffer along the front of the stalls as well as a vegetated swale. The landscape buffer will be consistent with the existing landscape fabric of the site. There will also be (1) tree per (8) new parking spaces as required.

Section 4.199.10. - Outdoor Lighting In General

Section 4.199.10. - Outdoor Lighting In General.

(.01) **Purpose.** The purpose of this Code is to provide regulations for outdoor lighting that will:

A. Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, productivity, enjoyment and commerce.

B. Conserve energy and resources to the greatest extent possible.

C. Minimize glare, particularly in and around public rights-of-way; and reduce visual discomfort and improve visual acuity over large areas by avoiding "light islands" and "spotlighting" that result in reduced visual perception in areas adjacent to either the source of the glare or the area illuminated by the glare.

D. Minimize light trespass, so that each owner of property does not cause unreasonable light spillover to other property.

E. Curtail the degradation of the nighttime environment and the night sky.

F. Preserve the dark night sky for astronomy and enjoyment.

G. Protect the natural environment, including wildlife, from the damaging effects of night lighting from human sources.

Response: The proposed area for the new parking stalls has existing site lighting that meet site lighting requirements and are located per the site plan Exhibit B. The new parking stalls were designed around the existing site lights.

Section 4.300. - General Underground Utilities

Section 4.320. - Requirements.

- (.01) **The developer or subdivider shall be responsible for and make all necessary arrangements with the serving utility to provide the underground services (including cost of rearranging any existing overhead facilities). All such underground facilities as described shall be constructed in compliance with the rules and regulations of the Public Utility Commission of the State of Oregon relating to the installation and safety of underground lines, plant, system, equipment and apparatus.**
- (.02) **The location of the buried facilities shall conform to standards supplied to the subdivider by the City. The City also reserves the right to approve location of all surface-mounted transformers.**
- (.03) **Interior easements (back lot lines) will only be used for storm or sanitary sewers, and front easements will be used for other utilities unless different locations are approved by the City Engineer. Easements satisfactory to the serving utilities shall be provided by the developer and shall be set forth on the plat.**

Response: New proposed parking area is located at the rear of the lot, all existing utilities in the area of work are underground and located as shown on the site plans Exhibit B.

Site Design Review

Section 4.400. – Purpose

- (.01) **Excessive uniformity, inappropriateness or poor design of the exterior appearance of structures and signs and the lack of proper attention to site development and landscaping in the business, commercial, industrial and certain residential areas of the City hinders the harmonious development of the City, impairs the desirability of residence, investment or occupation in the City, limits the opportunity to attain the optimum use in value and improvements, adversely affects the stability and value of property, produces degeneration of property in such areas and with attendant deterioration of conditions affecting the peace, health and welfare, and destroys a proper relationship between the taxable value of property and the cost of municipal services therefor.**

Response: Per section 4.155 Table 5: Parking Standards, the existing number of parking stalls provided (162) does not meet the minimum number of parking stalls (261) required inline with the existing building use. As shown on site plans Exhibit B and in this narrative the additional (83) parking stalls and the reclaimed (18) parking stalls the total provided parking stalls of (263) stalls bringing the site up to standards. Therefore by bringing the existing site up to standards will be a valuable addition to the City of Wilsonville that will meet the requirements of the site design review.

(.02) **The City Council declares that the purposes and objectives of site development requirements and the site design review procedure are to:**

- A. Assure that Site Development Plans are designed in a manner that insures proper functioning of the site and maintains a high quality visual environment.**
- B. Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;**
- C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;**
- D. Conserve the City's natural beauty and visual character and charm by assuring that structures, signs and other improvements are properly related to their sites, and to surrounding sites and structures, with due regard to the aesthetic qualities of the natural terrain and landscaping, and that proper attention is given to exterior appearances of structures, signs and other improvements;**
- E. Protect and enhance the City's appeal and thus support and stimulate business and industry and promote the desirability of investment and occupancy in business, commercial and industrial purposes;**
- F. Stabilize and improve property values and prevent blighted areas and, thus, increase tax revenues;**
- G. Insure that adequate public facilities are available to serve development as it occurs and that proper attention is given to site planning and development so as to not adversely impact the orderly, efficient and economic provision of public facilities and services.**
- H. Achieve the beneficial influence of pleasant environments for living and working on behavioral patterns and, thus, decrease the cost of governmental services and reduce opportunities for crime through careful consideration of physical design and site layout under defensible space guidelines that clearly define all areas as either public, semi-private, or private, provide clear identity of structures and opportunities for easy surveillance of the site that maximize resident control of behavior—particularly crime;**
- I. Foster civic pride and community spirit so as to improve the quality and quantity of citizen participation in local government and in community growth, change and improvements;**
- J. Sustain the comfort, health, tranquility and contentment of residents and attract new residents by reason of the City's favorable environment and, thus, to promote and protect the peace, health and welfare of the City.**

Response: As shown on the site plan provided under Exhibit B, the associated plans for the proposed scope of work meet all the design standards outlined within the development code. Adding to the existing high quality visual environment by providing additional parking site trees as required, while including vegetative swales to mitigate stormwater runoff from the proposed improvements.

Section 4.420. - Jurisdiction and Powers of the Board

- (.02) **Development in Accord with Plans.** Construction, site development and landscaping shall be carried out in substantial accord with the plans, drawings, sketches and other documents approved by the Board, unless altered with Board approval. Nothing in this subsection shall be construed to prevent ordinary repair, maintenance and replacement of any part of the building or landscaping which does not involve a substantial change from the purpose of Section 4.400. If the Board objects to such proposed changes, they shall be subject to the procedures and requirements of the site design review process applicable to new proposals.

Response: Site development and construction will be carried out according to the final DRB approved plans and conditions of approval. If any substantial changes are proposed, the project will be subject to the new procedures and requirements that pertain to the site design review process applicable to new proposals

Section 4.421. - Criteria and Application of Design Standards

- A. Preservation of Landscape.** The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soils removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

Response: The proposed scope of work will not greatly affect the current natural state of the site and will minimally affect natural ground scape as needed for the new parking stalls. No trees within the project scope area will be removed. However, new trees will be planed per design standards.

- C. Drives, Parking and Circulation.** With respect to vehicular and pedestrian circulation, including walkways, interior drives and parking, special attention shall be given to location and number of access points, general interior circulation, separation of pedestrian and vehicular traffic, and arrangement of parking areas that are safe and convenient and, insofar as practicable, do not detract from the design of proposed buildings and structures and the neighboring properties.

Response: The proposed scope of work will not detract from existing building or structures on the site or neighboring properties as it is located at the rear of the site.

- D. Surface Water Drainage.** Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties of the public storm drainage system.

Response: The proposed scope of work includes the addition of vegetative swales to help with surface water drainage as shown on Exhibit B and in Exhibit D. The swales are designed to meet water quality treatment and detention standards and will not adversely affect neighboring properties. The proposal also includes the converting of an existing loading dock into an at-grade bay door by constructing a new access ramp for an 10'-0" unobstructed interior transfer

area to meet the standards of PW Section 301.12.11.b.2(c) and 301.12.11.5(b) as shown on Exhibit B for additional information and details.

Section 4.450. - Installation of Landscaping

(.01) All landscaping required by this section and approved by the Board shall be installed prior to issuance of occupancy permits, unless security equal to 110 percent of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the applicant.

Response: All landscaping required by this section and approved by the DRB will be installed prior to issuance of occupancy permits.

(.02) Action by the City approving a proposed landscape plan shall be binding upon the applicant. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, as specified in this Code.

Response: The Landscape Planting Plan approved by the DRB will be installed as specified. Any substitutions, irrigation changes or alterations to the approved landscape plan are subject to Planning Director or DRB approval.

(.03) All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered with Board approval.

Response: All proposed landscaping approved by the DRB will be continually maintained by the owner's representative, unless altered with Board approval.

Tree Removal

Section 4.600. - Purpose and Declaration

- (.01) **Rapid growth, the spread of development, need for water and increasing demands upon natural resources have the effect of encroaching upon, despoiling, or eliminating many of the trees, other forms of vegetation, and natural resources and processes associated therewith which, if preserved and maintained in an undisturbed and natural condition, constitute important physical, aesthetic, recreational and economic assets to existing and future residents of the City of Wilsonville.**

Response: The project proposal does not require any tree removal within the project area scope.

Conclusion

As summarized in this narrative and with supporting evidence provided by the plan set the addition of the new (83) parking stalls along with the removal of the existing basketball to restore (18) parking stalls will allow the site to exceed the parking minimum requirements along with meeting the tenants parking needs while improving the visual quality of the site as shown on the attached plans provided under Exhibit B. The proposal also includes the converting of an existing loading dock into an at-grade bay door by constructing a new access ramp for an 10'-0" unobstructed interior transfer area to meet the standards of PW Section 301.12.11.b.2(b)(c), 301.12.11.4 and 301.12.11.5(b) as shown on Exhibit B. The narrative responses demonstrate that the proposed project does meet the development criteria outlined by the City of Wilsonville. As such, the applicant is requesting Development Review Board approval of the proposed application package which includes a Modified stage II and Site Design Review package.

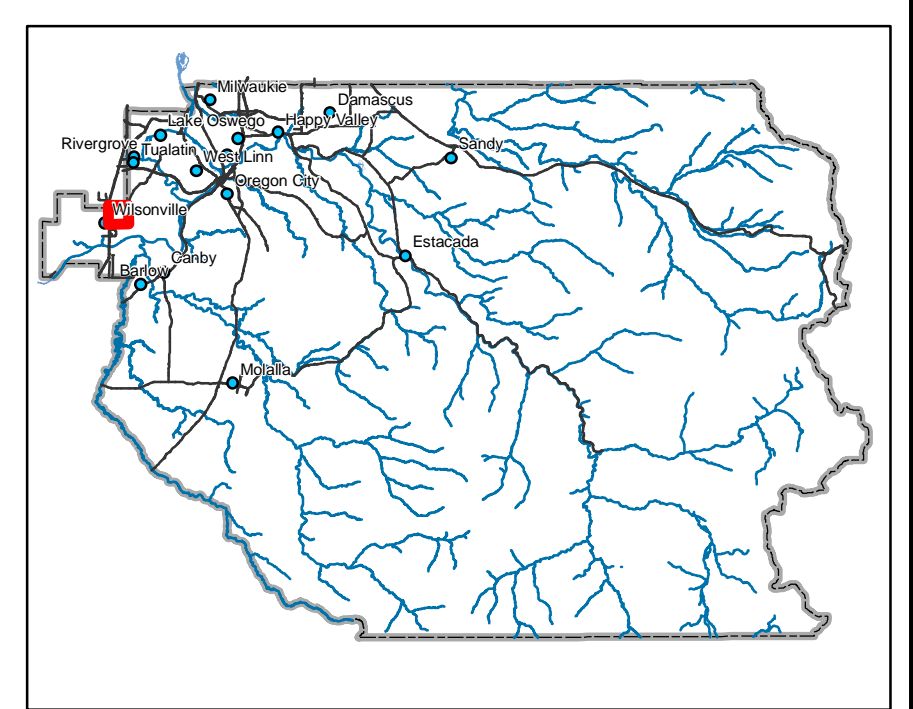
WILSONVILLE
SECTION 12 T.3S. R.1W. W.M.
CLACKAMAS COUNTY
1" = 400'

D. L. C.
JANE PAINTER NO. 52

Cancelled Taxlots

- 582
- 581
- 580
- 590
- 501
- 600
- 900
- 1000
- 503
- 490
- 405
- 504
- 505
- 502
- 592
- 506
- 500E1
- 500E2
- 408
- 301
- 409
- 508
- 598
- 601
- 509
- 507
- 500M2

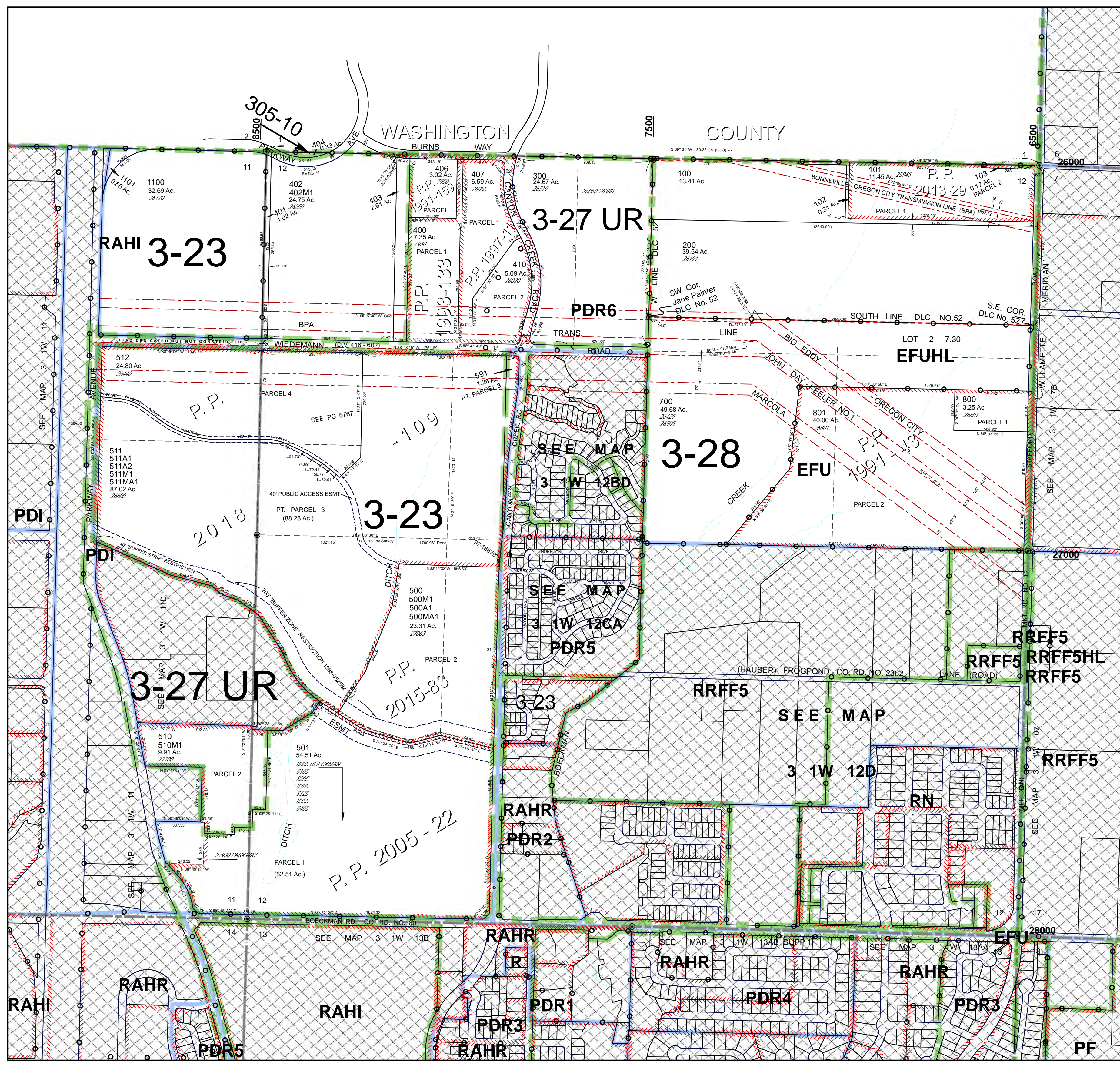
- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- Tax Code Lines
- Map Index
- Water Lines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT PURPOSES ONLY



5/3/2022



DDCI ENGINEERS
 921 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.DDCI-ENGINEERS.COM
 CIVIL / STRUCTURAL

PREPARED BY: [Signature]
 SIGNATURE: [Signature]
 EXPIRES: 12/31/2022

REVISIONS:

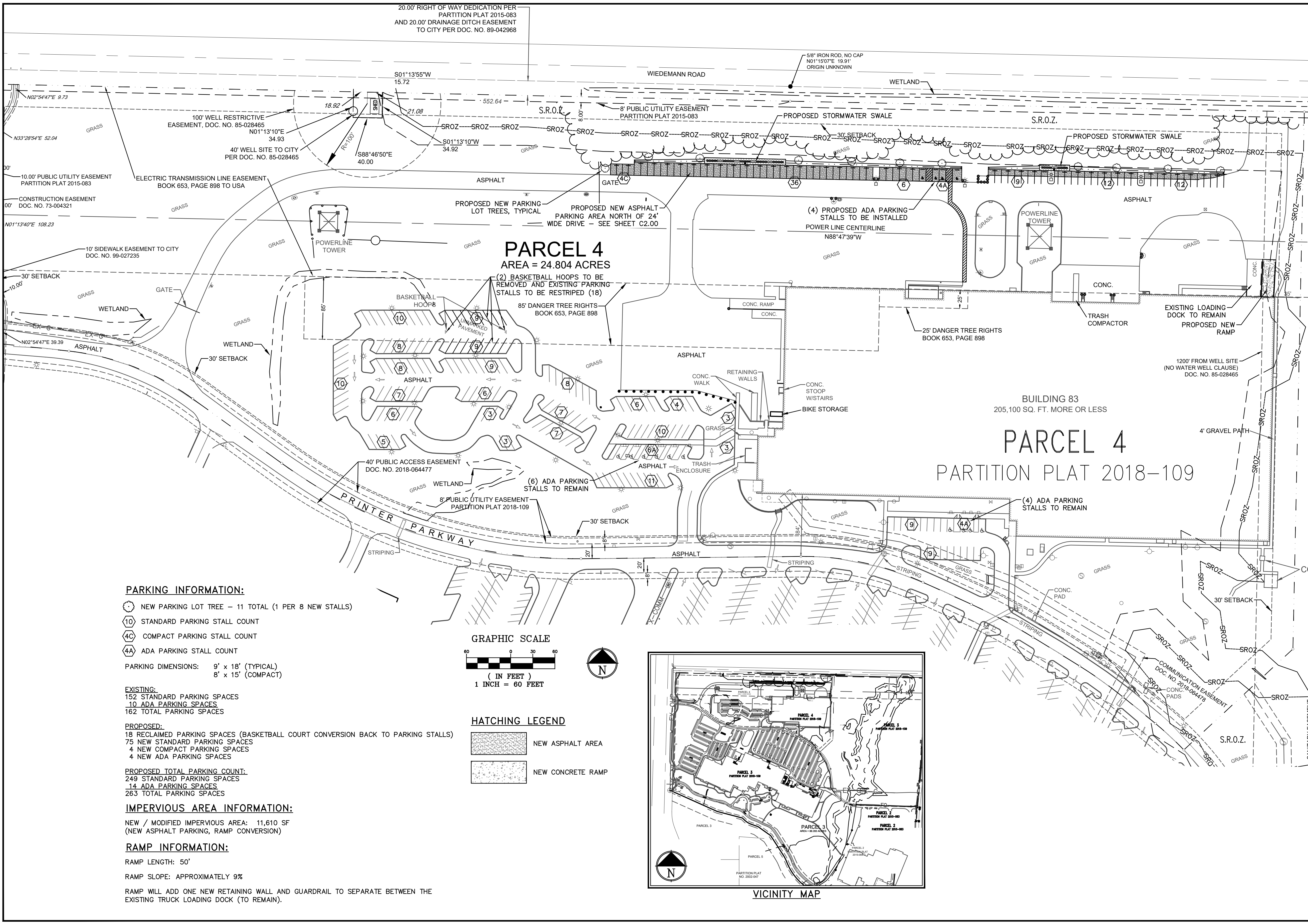
APPROVALS:

Job No.:	21032-0041
Proj. Manager:	R.J.L.
Designed:	K.L.E.
Reviewed:	R.L.L.
Drawn:	K.L.E.
Dwg. Checked:	R.J.L.
Scale:	AS SHOWN

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
PARKING PLAN

SHEET NO.
C0.01



PARKING INFORMATION:

- ⊙ NEW PARKING LOT TREE - 11 TOTAL (1 PER 8 NEW STALLS)
- ⑩ STANDARD PARKING STALL COUNT
- ④C COMPACT PARKING STALL COUNT
- ④A ADA PARKING STALL COUNT

PARKING DIMENSIONS: 9' x 18' (TYPICAL)
 8' x 15' (COMPACT)

EXISTING:
 152 STANDARD PARKING SPACES
 10 ADA PARKING SPACES
 162 TOTAL PARKING SPACES

PROPOSED:
 18 RECLAIMED PARKING SPACES (BASKETBALL COURT CONVERSION BACK TO PARKING STALLS)
 75 NEW STANDARD PARKING SPACES
 4 NEW COMPACT PARKING SPACES
 4 NEW ADA PARKING SPACES

PROPOSED TOTAL PARKING COUNT:
 249 STANDARD PARKING SPACES
 14 ADA PARKING SPACES
 263 TOTAL PARKING SPACES

IMPERVIOUS AREA INFORMATION:

NEW / MODIFIED IMPERVIOUS AREA: 11,610 SF
 (NEW ASPHALT PARKING, RAMP CONVERSION)

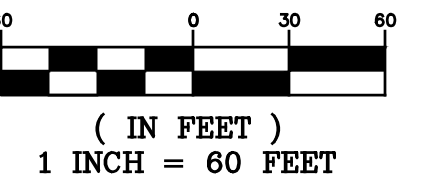
RAMP INFORMATION:

RAMP LENGTH: 50'

RAMP SLOPE: APPROXIMATELY 9%

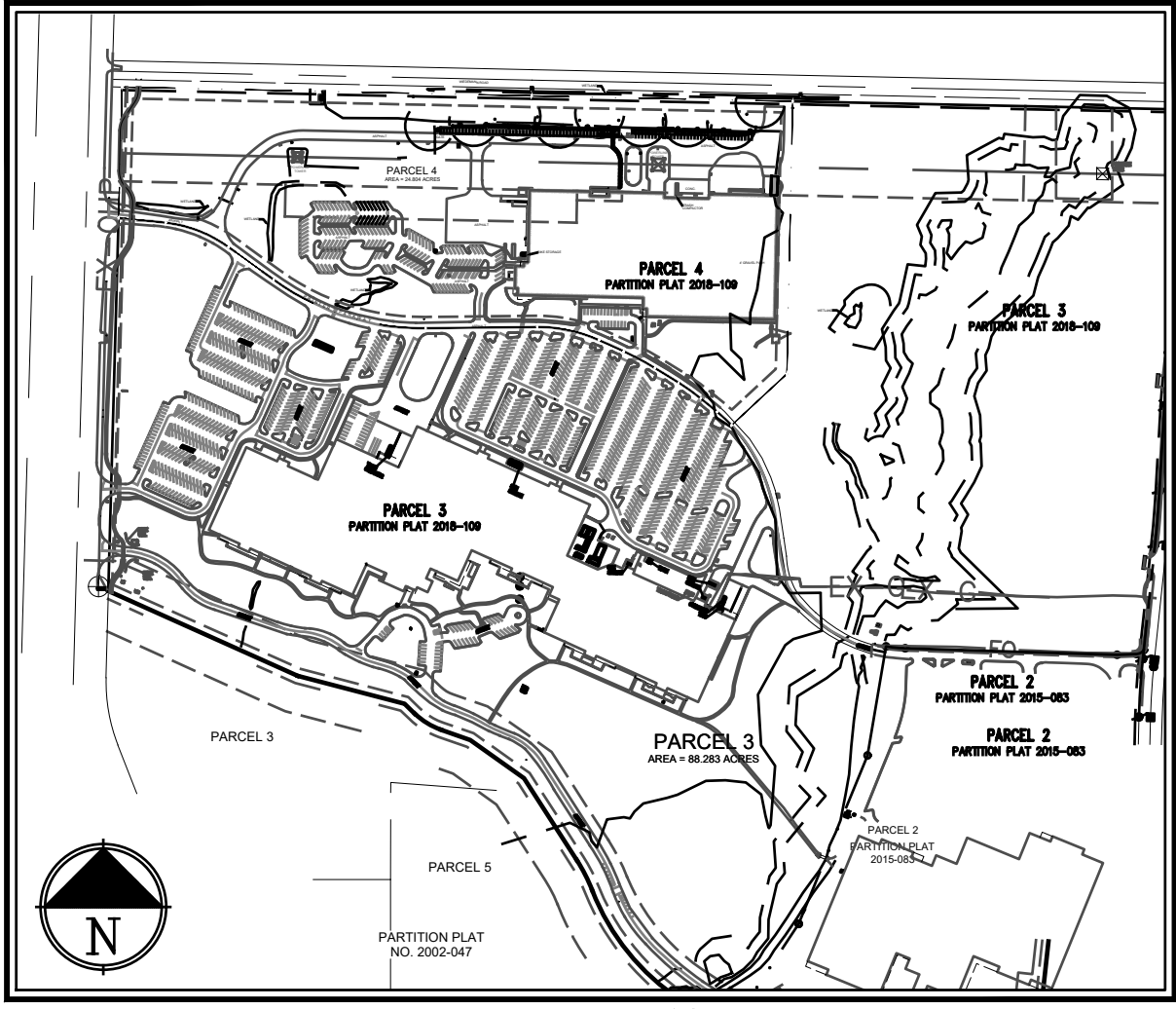
RAMP WILL ADD ONE NEW RETAINING WALL AND GUARDRAIL TO SEPARATE BETWEEN THE EXISTING TRUCK LOADING DOCK (TO REMAIN).

GRAPHIC SCALE



HATCHING LEGEND

- [Hatched Pattern] NEW ASPHALT AREA
- [Dotted Pattern] NEW CONCRETE RAMP



File Location: O:\0320-Portland\DCI\021\21032-0041 ESS Inc\DRAWINGS\SHEETS\21032-0041_PARKING-PLAN.rvt
 Plot Date: 2022-12-15
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CIVIL SPECIFICATIONS
ESS, INC.
26440 SW PARKWAY AVE.
WILSONVILLE, OR 97070

DIVISION 1 – GENERAL

A. These specifications are general in nature and are intended to set minimum standards for construction and materials. Quality of materials and details of installation shall, at a minimum, comply with established industry and product manufacturer's standards. Higher standards, where stated in these specifications, in submitted literature, or on Drawings shall govern. Workmanship shall be maintained at good quality by the General Contractor.

B. EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- B.1. Bidders shall examine the site where the work is to be performed and ascertain for themselves all of the physical conditions and restrictions before submitting price quotations. They will also make careful examination of the Drawings, Specifications and other Contract Documents and inform themselves as to the quality of materials.
- B.2. Bidders finding discrepancies, omissions or in doubt as to the true meaning of any part of the Drawings, Specifications and other Contract Documents, shall notify the Engineer in sufficient time to receive clarification prior to starting any work.
- B.3. The Owner will not be responsible for any loss, or for any unanticipated costs which may be suffered by the Contractor in regards to conditions pertaining to the work, including conditions that can be seen on the site and/or are described in Drawings, Specifications, geotechnical reports, surveys, etc. That are available to the Contractor.
- B.4. These Specifications may include material and/or performance specifications that may not be part of the Contract, but will be needed to coordinate work by others.
- B.5. Contractor shall coordinate their work with the work by others to provide minimal delays to all parties.
- B.6. The General Contractor is responsible to provide all design and engineering services, for design/build items noted. This includes coordination with other affected disciplines (mechanical, electrical, fire protections, structural, etc.) And all permit requirements (energy code compliance, etc.) necessary for a complete system design.

C. SHOP DRAWINGS AND SUBMITTALS

- C.1. Submit shop drawings of portions of the work indicated in individual sections of this Specification. Submittals of items not indicated may or may not be reviewed at Engineer's option.
- C.2. For bidder designed items (Deferred Submittals), the drawings and calculations shall bear the stamp of an engineer (product engineer) registered in the state where the project is located. Such drawings shall certify that the drawings have not deviated from the DCI design drawings in any way, or shall call to the attention of DCI that the product engineer has deviated from the DCI design drawings. Such deviation may be cause for rejecting the shop drawings. See Drawings for items classified as Deferred Submittals.
- C.3. Submittals to be provided at least 3 weeks prior to beginning fabrication.
- C.4. General Contractor to review submittals before transmitting to Engineer, and place their review stamp date and marks on all copies.
- C.5. DCI will review and mark-up one pdf format submittal. The contractor will be responsible for distributing mark-ups as required. Submittals will be stamped and returned to General Contractor within two weeks for distribution.

D. TEMPORARY FACILITIES

- D.1. Utilities. The Contractor shall be solely responsible for all other temporary facilities including all sanitation, water, electric, etc. Contractor to pay costs of all utilities until the time of substantial completion.
- D.2. TEMPORARY BRACING
 - D.2.a. Contractor shall be solely responsible for the design and installation of all temporary bracing, shoring, anchors, etc., including, but not limited to, wall and roof bracing, lifting and handling inserts and devices, trench shoring, forms, etc.
 - D.2.b. Contractor shall consider construction loads whenever such loads are in excess of normal design loads. Particular attention should be given to forklifts, workman, wheel loads, storage of materials, etc. Contractor shall be solely responsible for all shoring, bracing, cribbing, etc. Required to support construction loads.

E. PROJECT CLOSEOUT

- E.1. Record Drawings.
 - E.1.a. Maintain a record set on site during all phases of work.
 - E.1.b. Accurately record all field changes as they occur. Show all concealed changes in the work and the final location of all utilities. Underground utility record Drawings (marked up prints) shall be submitted as soon as the work is completed and not later than the request for payment for the work.
 - E.1.c. Deliver "record" set of Drawings to the Engineer on day of final completion.
- E.2. Clean up: All areas of the site are to be finished, cleaned and suitable for use. Remove foreign matter, marks, stains, foreign paint, fixtures, equipment, dirt, etc.
- E.3. All corrective work and the "closeout" shall occur on a timely basis.

DIVISION 2 – SITE WORK

A. GENERAL

- A.1. Geotechnical Report. Foundation investigations have been completed and are available at the Engineer's office. All bidders shall familiarize themselves with the subsurface and site conditions.
- A.2. Acceptance of site. Bidders shall inspect the site and be familiar with typical conditions in the area and the conditions under which the work is to be performed. The site shall be accepted in its existing condition and no claim shall be made for any visible condition not shown on the Drawings.
- A.3. Construction use – Contractor shall:
 - A.3.a. Exercise caution in the use of the site, particularly when subgrade materials are moisture sensitive and wet conditions exist in the subgrade.
 - A.3.b. Make special provisions for construction access consistent with the requirements of the project and so that work can proceed under normal weather conditions.
 - A.3.c. Be responsible for correcting damage to the subgrade caused by construction activities.
 - A.3.d. Be solely responsible (unless otherwise provided for in the Contract) for the methods and cost for construction of access roads, added

provisions to specified systems to support construction loads and for correction to site conditions and/or installed work that is damaged by construction activities.

A.3.e. Plan construction activities to prevent and/or mitigate damage to site.

B. QUALITY CONTROL

- B.1. Contractor is to be experienced with the type of work and conditions where the work is to be performed. Contractor shall be responsible for the selection of the materials and methods for accomplishing the work. Special attention is directed to the conditions at the time the work is to be performed.
- B.2. Finish subgrade for paving and concrete slab on grade to be within 0.06 foot of grades and contours shown on Drawings. Finish base rock for paving and slab on grade shall be plus or minus 0.04 foot. Verify compliance with Engineer before proceeding with next phase of work. (Failure to do so will place responsibility for correction upon Contractor).
- B.3. Place stakes at all locations of spot grades shown on Drawings. (Failure to do so will place responsibility for correction upon Contractor).
- B.4. Notify Engineer for observation of compliance of subgrade and fill with paragraph B.2 above. Obtain approval prior to placement of subsequent fill and paving.

C. CLEARING AND STRIPPING

- C.1. Review requirements for protecting existing vegetation (trees, etc.) before start of work.
- C.2. Notify Engineer immediately if unusual conditions are encountered.
- C.3. Site shall be cleared and stripped of all vegetation, topsoil, and organic materials. Remove and dispose off-site unless specifically provided otherwise on the site work Drawings. Stockpile topsoil on site that is needed for later use.
- C.4. Remove all stumps and roots over 1 inch diameter from all topsoil for landscaping use.

D. EXCAVATION

- D.1. Excavate for footings, piers and slabs to sizes and levels shown or required. Utilize straight edge bucket to minimize soil disturbance. Clean all footing excavations of loose material.
- D.2. All over-excavation shall be back-filled and compacted as "Engineered fill" or with concrete to same specifications as footing concrete.
- D.3. If over-excavation is required to remove soft spots resulting from conditions beyond the control of the Contractor, the Contractor shall receive additional compensation. Notify Engineer before proceeding.
- D.4. Soft spots created by the construction activities and special requirements for the construction process are the responsibility of the Contractor. (See paragraph "A" above)
- D.5. Do not excavate closer than 2:1 slope below base of footings unless approved by Engineer.
- D.6. All excavated material not approved or required for the project to be removed at no additional cost. Grade and cover stockpiled material as required to afford weather protection.

E. FILL MATERIALS AND INSTALLATION

- E.1. Notify Geotechnical Engineer prior to the start of all "Engineered fill" work so that the subgrade condition and fill material can be inspected. Obtain compaction tests if required.
- E.2. "Engineered fills": If approved by the Geotechnical Engineer, on-site materials, free of organic material, may be used for structural fill (under buildings and paved areas) subject to maintenance of a proper moisture content and obtaining required compaction.
- E.3. "Select Fill" (Unless directed otherwise by the Geotechnical Report):
 - E.3.a. Under building and footings: 1-1/2 inch minus well graded clean crushed rock (less than 5 percent passing 200 sieve).
 - E.3.b. Under paving: Base course of 1-1/2 inch minus or 3/4 inch minus well graded clean crushed rock (less than 5 percent passing 200 sieve) of depth shown on Drawings.
 - E.3.c. Trench backfill. Unless otherwise specified, all trench backfill shall be 3/4 inch minus well-graded clean crushed rock. (Less than 8 percent passing 200 sieve).
 - E.3.d. Back fill where finish grade is above building floor: With free draining granular material, pea-gravel or drain rock.
 - E.3.e. Rip Rap: Class 50 unless otherwise noted on the plans.
- E.4. Top soil: Natural topsoil from on-site or as required by the plans, suitable for growing plants and free of limbs, roots, and rocks over 1 inch diameter. Remove any concrete or debris from planting areas. Cut and remove any paving more than 6 inch behind curb in planting areas.
- E.5. Compaction (Unless directed otherwise by the Geotechnical Report):
 - E.5.a. Selection of compaction equipment and processes shall be the sole responsibility of the Contractor.
 - E.5.b. Prepare areas to receive "Engineered" or "Select" fill by compacting subgrade. If subgrade moisture content is not suitable, confer with Engineer and condition material to near "optimum" and compact.
 - E.5.c. Install material (except topsoil) in lifts not to exceed 8 inches (loose) and compact with suitable equipment.
 - E.5.d. Minimum density (per ASTM D-1557) as follows:

E.5.d.a. APPLICATION (See Note 3 below)	COMPACTION
– Beneath foundations	95%
– Beneath slabs	95%
– Beneath pavements (See Note 1 below)	95%
– Retaining or basement wall backfill (see Note 2 below)	92%
– Wall backfill	95%
– Utility Trench Backfill:	
– Upper 3 ft beneath pavements, slabs or structures	95%
– Below 3 ft beneath pavements, slabs or structures	92%
– In landscaped areas above pipe zone	90%
– Landscape areas	90%

E.5.e. NOTES:

- 1. Special attention to base rock and A.C. Paving placed against concrete at overhead doors to ensure proper compaction is achieved.
- 2. Use lightweight, manually-guided compactors within 3 feet of all walls.
- 3. Where conflicts occur between the above values, the highest percentage shall govern.
- 4. Initial compaction tests will be provided by Owner. Contractor shall be responsible for all re-testing required by tests not meeting Specifications. Contractor shall assist in scheduling all tests.

F. GEOTEXTILE

- F.1. Provide geotextile fabric (filtration or separation) and geogrid where indicated on the drawings. Notify engineer prior to placement.
- F.2. Stabilization geotextile fabric shall be woven fabric with minimum mullen burst strength of 300 psi; approved manufacturer/grades: mirafix 500x, fibertex (grade 300), or as approved.
- F.3. Filtration (drainage) geotextile fabric shall be non-woven fabric with minimum values: permittivity – 0.5/s; grab strength – 80 lb; puncture strength – 35 lb; mullen burst strength – 130 psi; apparent opening size – us sieve 70. approved manufacturer/grades: thrace-linq 125ex; wellstone mills trs e040, r040, or r042; us fabrics us 90nw; propex geotex 401; or as approved.
- F.4. Separation geotextile fabric shall be woven fabric with minimum values: permittivity – 0.01/s; grab strength – 180 lb; puncture strength – 80 lb; mullen burst strength – 290 psi; apparent opening size – us sieve 30. approved manufacturer/grades: thrace-linq gtf 200s; us fabrics us 200; propex geotex 200st; or as approved.
- F.5. Material for geogrid shall be as noted on the drawings.
- F.6. Area to receive geotextile fabric or geogrid to be graded smooth without abrupt elevation change so product will stretch tight and lay smooth over subgrade. Installation methods, equipment used, staking, repair and layout direction shall be per manufacturers directions. Provide adequate laborers to ensure that products are kept smooth as work progresses.

G. EROSION AND SEDIMENTATION CONTROL

- G.1. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from drainage.
 - G.2. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
 - G.3. Materials:
 - G.3.a. Gravel-filled sandbags (for gravel bag berms and gravel bag check dams): Burlap sacks filled with 3/4" rock or 1/4" pea gravel, stacked tightly, as shown on drawings.
 - G.3.b. Stabilized construction entrance: (A minimum of 6" thick) 1" to 3" coarse aggregate, placed over geo-synthetic fabric for stability.
 - G.3.c. Slit fence: Filter fabric material 36" wide with stitched loops over 2"x2" posts.
 - G.3.d. Temporary Gravel Construction Entrance/Exit: material shall be at least 1 1/2" clean rock with less than 5% passing the #200 sieve. Industrial, commercial, and subdivision sites shall use 2"-6" rock.
 - G.4. All erosion control measures shall be inspected after each runoff producing rainfall and regularly during prolonged rainfall.
 - G.5. All temporary erosion and sediment control measures shall be removed or stabilized onsite. Disturbed soil areas resulting from removal shall be permanently stabilized.
- H. ASPHALTIC CONCRETE PAVING**
- H.1. Proof roll subgrade to verify stability. Notify Engineer to observe rolling. Remove and replace all soft spots encountered with compacted suitable material prior to rocking.
 - H.2. Base material to be select fill as specified above.
 - H.3. Check finished base rock for slope before starting paving. Notify Engineer before proceeding with paving if any site areas have insufficient slope less than 1 percent).
 - H.4. Asphalt paving to be level 3, dense graded, 1/2" hmac mix (ODOT). Contractor to specify thickness shown on drawings. Deliver and place asphalt paving in accordance with current ODOT standard specifications as applicable unless otherwise approved.
 - H.5. Slope all asphalt paving minimum one percent (0.01) to drain (unless otherwise shown on Drawings).

I. STRIPING

- I.1. Cross stripe all paved abrupt slopes exceeding 50 percent slope with safety yellow 3 inch wide stripes at 24 inches on center.
- J. EXTRUDED CONCRETE CURBS**
- J.1. Curbs to be no-slump concrete with a minimum compressive strength of 3000 PSI at 28 days.
 - J.2. Spread epoxy bonding agent such as Concessive #1064 approved equal over surface to receive curb. Install curb within 20 minutes after applying bonding agent.
 - J.3. Provide joints as required.
 - J.4. Apply curing compound to all surfaces immediately following placement.
 - J.5. Use caution in starting work that requires traffic on fresh placed asphalt paving. Check condition of paving and verify schedule for start of work with Engineer.
- K. SITE UTILITIES**
- K.1. General.
 - K.1.a. The work to be provided by the Contractor shall consist of furnishing all labor, materials, permits, surveying, supervision, coordination, and equipment necessary for the proper installation of the storm drainage, sewer system, and the water systems that are indicated on these Drawings. The work is to be completed so as to provide properly functioning systems that are acceptable to the governing authorities and as indicated on these Drawings.
 - K.1.b. Approvals: Different jurisdictions may prohibit the use of certain construction materials and/or procedures. Do no work without approval from the proper jurisdiction. Cost of changes incurred when work has proceeded without jurisdictional approval shall be the sole expense of the Contractor.
 - K.1.c. Safety: The safety (as it relates to this construction project) of workers, neighbors, and passers-by is to be the responsibility of the Contractor. Unsafe conditions shall be identified and corrected or, identified and secured. Work methods that may cause an unsafe condition to exist, shall be avoided at all costs.
 - K.1.d. Drawings: Drawings provided are based on reported site conditions and dimensions. Actual site conditions, or dimensions, may vary and any such variation should be reported to the Engineer at the earliest opportunity. Unanticipated conditions may require the revision of a portion of these Drawings. All dimensions shall be verified in the field by the Contractor prior to fabrication or construction of any portion of the proposed work.
 - K.1.e. Permits: The Contractor shall arrange and pay for permits, fees, service charges and inspections and shall present the Owner with a properly executed "Certificate of Inspection", prior to making application for payment for any portion of the work.
 - K.1.f. Codes: All work methods and materials shall conform to all local, state

- and federal requirements, regulations, and laws.
- K.2. MATERIAL: All materials used for the work shall be new unless noted on plans. Trade names denote character and quality of equipment desired and substitutions may be approved, if in the opinion of the Engineer, the proposed substitution is expected to perform properly. All costs associated with the Engineers review and changes in construction costs associated with the proposed substitution shall be the responsibility of the Contractor.
- K.3. WATER:
 - K.3.a. Copper Pipe: Type K (soft copper 1/2" to 1-1/2", hard copper 2" and larger), underground piping, conforming to ASTM B-88. Fittings shall be wrought copper. Solder all joints and fittings.
 - K.3.b. Ductile Iron Pipe (D.I.P.): Shall be cement-mortar lined and shall conform to ANSI A21.51, Class 52. All joints shall use O-ring rubber gaskets. Fittings shall be 125-pound class, meeting the requirements of ANSI C110.
 - K.3.c. C-900 Polyvinyl Chloride Pipe (PVC C900 OR C905): Public and private FDC water pipe and fittings shall be Class 200 PVC C900. Private fire pipe and fittings shall be CLASS 150 PVC C900 OR C905 unless otherwise noted on the plans. C900 AND C905 PIPE shall meet the requirements of ASTM D-1784 in accordance with the requirements of AWWA C900. Gaskets at connections shall be used per ASTM F-477 to seal integral bell socket to the spigot of each joint, conforming to the requirements of ASTM D-3139.
 - K.3.d. Schedule 40 polyvinyl chloride pipe (SCH 40 PVC): private domestic and irrigation water pipe and fittings shall be schedule 40 PVC (1/2" – 4"). Schedule 40 pipe shall be manufactured in compliance with ASTM D-1785.
 - K.3.e. Water Service: Piping, valves, backflow prevention, vaults, meters, hydrants, and connection to main line shall be according to the requirements of the governing agencies.
 - K.3.f. Alternate materials may be used if approved by the governing agency and the current State of Oregon Plumbing Specialty Code.

- K.4. STORM SEWER – All storm sewer pipe shown on the plans shall be Polyvinyl Chloride 3034 (PVC) pipe unless specified as other than PVC. Pipe materials other than those specified on the utility plan shall not be used unless authorized by Engineer. Likewise, pipe materials not listed below shall not be used without authorization from the Engineer.
 - K.4.a. Polyvinyl Chloride Pipe (PVC): Pipe and fittings shall be PVC and shall meet the requirements of ASTM D-3034 SDR 35 (4"-15", solid wall) and ASTM F679 (18"-36", solid wall). Corrugated PVC Profile pipe (smooth interior) shall meet the requirements of ASTM F794-01 (4"-48").
 - K.4.b. C900 Polyvinyl Chloride Pipe (PVC C900 OR C905): Pipe and fittings shall be PVC C900 (4" – 12", dr 25, dr 18 or dr 14) OR C905 (14" – 48", dr 25, dr 21 or dr 18) and shall meet the requirements of ASTM D-1784 in accordance with the requirements of AWWA C900. Gaskets at connections shall be used per ASTM F-477 to seal integral bell socket to the spigot of each joint.
 - K.4.c. High density polyethylene pipe (HDPE): pipe and fittings shall be HDPE and shall meet the requirements of AASHTO M-252 (3"-10"), M-294 (12" and larger), type S (4"-48" corrugated outside, smooth inside), type D (closed profile with smooth interior, 42"-48") and MP7 (54" and 60" type S and type D). HDPE meeting ASTM f 2648 (2"-60") may be used for private storm systems that do not operate under surcharge/pressure. Pipe can be solid, perforated or slotted. All joints shall be gasketed, lab test certified to 3.5 psi joints: Integral bell/spigot with a rubber gasket meeting ASTM f-477 installed on the spigot end.
 - K.4.d. Concrete Pipe: Pipe and fittings shall be concrete bell and spigot pipe with rubber gaskets in confined grooves conforming to ASTM C-14 for Non-reinforced Concrete Pipe (CONC) and ASTM C-76 for Reinforced Concrete Pipe (RCP).
 - K.4.e. Soil Pipe (Traffic areas where cover is less than 15 inches from finish grade to top of pipe): Pipe shall be hub and spigot cast iron pipe (CIP) or Schedule 52 ductile iron bell and spigot pipe (DIP) with fittings conforming to ASTM A-74, with rubber O-ring gaskets in confined grooves or, with compression type gasket fittings, or PVC C900 (dr 25, dr 18 or dr 14), OR C905 (dr 25, dr 21 or dr 18 only).
 - K.4.f. Corrugated Metal Pipe (CMP): Shall be of the type, diameter, and gauge indicated on the Drawings. Pipe and fittings shall be helical corrugated unless otherwise specified. Pipe and fittings ends shall be annular for a distance of 12 inches. Pipes shall be connected with 12-inch wide annular corrugated coupling bands and 1/2 inch thick by 12-inch wide rubber gaskets.
 - K.4.g. Catch Basins: Shall be 24 inch square and minimum 30 inch high (see plan for stand requirements), unless otherwise indicated, with 28 inch square standard cast iron grate and hinged drain access plates for clean-outs, all as manufactured by Gratemaster Ironworks or equal. Catch basins to be constructed of 10 gauge steel and to be asphalt coated after fabrication.
 - K.4.h. Downspout Drains: Verify locations and special requirements with building elevation Drawings and with roof plans for downspout location. Adjust location as needed to assure plumb vertical downspout run. Notify Engineer of any discrepancy or other problem. Drains in paved areas to be cast iron soil pipe or Schedule 40 PVC.
 - K.4.i. Drains in landscaped areas may be PW storm drain Series 46 with 80 percent compaction and with compaction verification. Provide clean-out at each downspout. Use branch fitting with threaded plug for clean-out.
 - K.4.j. Manholes and Cleanouts:
 - K.4.j.a. PVC Storm Manhole: Main body and pipe stubs shall conform to ASTM D1784 cell class 12454. Gaskets shall be made from material meeting the requirements of ASTM F477. Ductile iron shall be used to manufacture the castings, and shall conform to ASTM A536 grade 70-50-05.
 - K.4.j.b. See SANITARY SEWER below.

K.5. SANITARY SEWER

- K.5.a. Polyvinyl Chloride (PVC) Pipe: Pipe and fittings shall be PVC and shall meet the requirements of ASTM D-3034 SDR 35 (4"-15") and ASTM F679 (18"-27"); Schedule 40 PVC (or PVC C-900) shall be used in areas where the pipe cover is to be less than 15 inches from finish grade to top of pipe.
- K.5.b. C900 Polyvinyl Chloride Pipe (PVC C900 OR C905): Pipe and fittings shall be PVC C900 OR C905 and shall meet the requirements of ASTM D-1784 in accordance with the requirements of AWWA C900. Gaskets at connections shall be used per ASTM F-477 to seal integral bell socket to the spigot of each joint.

PREPARED BY: **ESS INC. ENGINEERS**
 924 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.ESSINC.COM
 CIVIL / STRUCTURAL
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SIGNATURE:

REVISIONS:

APPROVALS:

Job No.:	21032-0041
Proj. Manager:	RJL
Designed:	KLE
Reviewed:	RJL
Drawn:	KLE
Dwg. Checked:	RJL
Scale:	AS SHOWN

PROJECT TITLE: **ESS INC. SITE IMPROVEMENTS**

SHEET TITLE: **CIVIL SPECIFICATIONS**

SHEET NO. **C0.10**

File Location: O:\0320-PortlandDCI\02121032-0041_ESS Inc\0-DRAWINGS\SHEETS\21032-0041_COV.RWG
Plot Date: 2022-12-15
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- K.5.c. Concrete Manholes: Shall be fabricated per ASTM C-478 and shall be 48-inch diameter (minimum) with a 3-foot eccentric cone over standard sections. Where manhole depths are not adequate for cones, use 8-inch thick (State Highway) flat top slabs. Use standard cast iron frames and covers for storm and use watertight standard cast iron frames and covers for sanitary sewers.
- K.5.d. Corrugated Manholes: Shall be of the same material, gauge, and coating as the corrugated pipe. Manhole lid and frame shall be constructed as to not directly bear upon the top end of the corrugated manhole.
- K.6. EXECUTION.
 - K.6.a. Sewer Clean-Outs: Shall be installed in the storm and sanitary systems where noted on Drawings (CO) and where specifically required by the governing code. Clean-outs in exterior paved areas shall be heavy duty cast iron access box with secured cover, anchoring flanges, and cast iron clean-out with serrated cut-off sections and threaded bronze plug. Provide an 18 inch square by 6 inch thick concrete pad around the clean-out IN UNPAVED AREAS.
 - K.6.b. Rim elevations of utility and drainage structures shall be installed so that rims may be adjusted ±0.5' to match finish grade.
 - K.6.b.a. Rimriser adjustment screws may be used to facilitate installation of rim to be flush with finished grade.
 - K.6.c. Bedding: Bed all piping on a minimum 4 inch thick layer of sand or 3/4 inch minus crushed rock. Inspection of the excavated trench by the Engineer may provide for the use of compacted native material for bedding. Provide Owner with deductive alternate for use of native bedding material. Bedding shall be removed to the necessary depth for piping bells and couplings to maintain contact of the pipe on the bedding for its entire length.
 - K.6.d. Pre-Cover: Cover the pipe to a minimum depth of 5 inches with compacted sand or 3/4 inch minus crushed rock. Inspection of the excavated trench by the Engineer may provide for the use of compacted native material pre-cover. Provide the Owner with deductive alternate for use of native pre-cover material.
 - K.6.e. Back Fill: All back fill for site utilities shall be placed in layers and compacted as required by Division 2, Fill Materials and Installation.
 - K.6.f. Grading: Following back filling, grade trenches to the level of surrounding soil. All excess soil shall be disposed of off-site, unless otherwise directed by the Engineer.
- L. ACCESSIBLE (HANDICAP) SIGNAGE
 - L.1. Signs to be metal panels with permanent contrasting characters and background complying with state and local regulations and ADAAG requirements. (See Division 10, SIGNS, for additional information).

DIVISION 3 -- CONCRETE


- A. GENERAL
 - A.1. All work to comply with ACI codes and standards.
 - A.2. Inspections/testing.
 - A.2.a. Owner will provide a part-time concrete inspector and will conduct laboratory tests as required to verify compliance with the project Specifications. Contractor shall be solely responsible for compliance with the Specifications.
 - A.2.b. Contractor shall be responsible for any extra concrete sampling or testing such as field cured cylinders for determining strength for lifting panels, etc.
 - A.3. Tolerances:
 - A.3.a. Walls, columns: Maximum deviation from plumb = 1/4 inch.
- B. FORMWORK AND SHORING
 - B.1. Contractor shall be solely responsible for providing the necessary formwork and shoring suitable for the conditions involved and compatible with the finished appearances.
 - B.2. Ground forms. To the extent practical all isolated footings should be ground formed or partially ground formed. Clean all ground formed footings of loose debris and use caution during concrete placing to avoid cave-ins.
 - B.3. Chairs for reinforcing steel shall be adequate to securely support and hold reinforcing steel in place. For concrete slab on grade and tilt wall panels reinforcing shall be supported at not greater than 6'-0" on center for #5 bars or larger. For tilt wall panel reinforcing shown each face on Drawings, the top bar shall adequately be supported using metal chairs.
- C. CONCRETE MIX/MATERIAL
 - C.1. Strength: Average 28 day concrete strength determined by job cast lab cured cylinder to be as indicated below plus increase depending on the plant's standard deviation as specified in ACI 318. Provide mix designs to the Engineer for all concrete to be used. Clearly label all mix designs for proposed area of use.
 - C.2. Minimum mix requirements:

LOCATION	MIN. COMP. STRENGTH	SLUMP (a)	MIN. CEM. CONTENT	ADMIXTURES
Miscellaneous	3,000 PSI	0" - 5"	470 LB.	(b)

NOTES:
 (a) - Slump exceeding specified limits shall not be incorporated in the project except by written approval from Engineer.
 (b) - WRA = water reducing agent.
 - C.3. Use Type I Cement, per ASTM C-150 unless otherwise approved.
 - C.4. Aggregate ASTM C33. Size to be 3/4 inch maximum size aggregate.
 - C.5. Water Reducing Agent (WRA) shall be Polyheed R-1 or Duracem 55 (minimum 6 oz. Per 100 pounds cement). Comply with ASTM C-494.
- D. REINFORCING
 - D.1. All reinforcing to be ASTM A615 Grade 60 unless otherwise noted.
 - D.2. Use only A706 weldable rebar if rebar is to be welded. Use only low hydrogen electrodes. All welding to be in compliance with AWS D1.4.
 - D.3. Fabricate and install reinforcing steel according to the Manual of Standard Practice for Detailing Reinforced Concrete Structures-ACI Standard 315.
 - D.4. Provide 2'-0" x 2'-0" corner bars to match horizontal reinforcing in poured-in-place walls and footings at all corners and intersections.
 - D.5. Splices in wall reinforcing shall be lapped 40 bar diameters (2'-0" minimum) and shall be staggered at least 4 feet at alternate bars.
 - D.6. All openings smaller than 30 inches x 30 inches that disrupt reinforcing shall have an amount of reinforcing equal to the amount disrupted placed both sides of opening.
 - D.7. Provide the following reinforcing around wall openings larger than 30 inch x

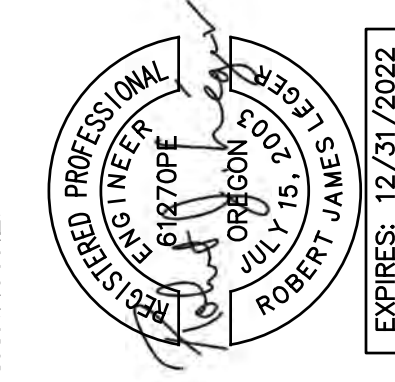
- 30 inch.
 - D.7.a. (2) #5 over opening x opening width plus 2' - 0" each side.
 - D.7.b. (2) #5 under opening x opening width plus 2' - 0" each side.
 - D.7.c. (2) #5 each side of opening x full story height.
 - D.7.d. Provide 90 degree hook for bars at openings if required extension past opening cannot be obtained.
 - D.8. Provide (2) #4 continuous bars at top and bottom and at discontinuous ends of all walls.
 - D.9. Provide dowels from footings to match all vertical wall, pilaster and column reinforcing. (Poured-in-place columns and walls).
 - D.10. Lap all bars in continuous and intersecting footings 2'-0" or 40 bar diameters, whichever is greater.
 - D.11. All vertical wall reinforcing to be placed in center of wall unless shown otherwise on Drawings.
 - D.12. Extend reinforcing to within 1 inch of wall and slab edges unless otherwise noted.
- E. CONTROL JOINTS AND EXPANSION JOINTS
- E.1. Provide joints in exterior walks as follows unless otherwise shown: Heavy (3/4 inch) tooled joint at 5 feet on center or a maximum panel aspect ratio of 1.3 to 1.0.
 - E.2. Keyed joints: Where keyed joints are required or allowed, follow precisely the key configurations. Use of preformed plastic keys will not be allowed.
 - E.3. Doweled joints: Where doweled joints are required or allowed, take precautions to maintain square alignment both horizontal and vertical. All dowel material to be saw cut or ground smooth to maintain cross-section at ends.

PREPARED BY:



924 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.MDCIENGINEERS.COM
 CIVIL / STRUCTURAL
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SIGNATURE:



ROBERT JAMES STEFF
 PROFESSIONAL ENGINEER
 JULY 15, 2003
 EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041	
Proj. Manager: R.J.L.	
Designed: K.L.E.	
Reviewed: R.J.L.	
Drawn: K.L.E.	
Dwg. Checked: R.J.L.	
Scale: AS SHOWN	

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
CIVIL SPECIFICATIONS

SHEET NO.
C0.11

REVISIONS:

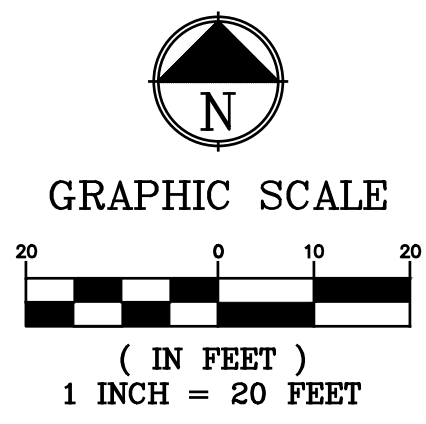
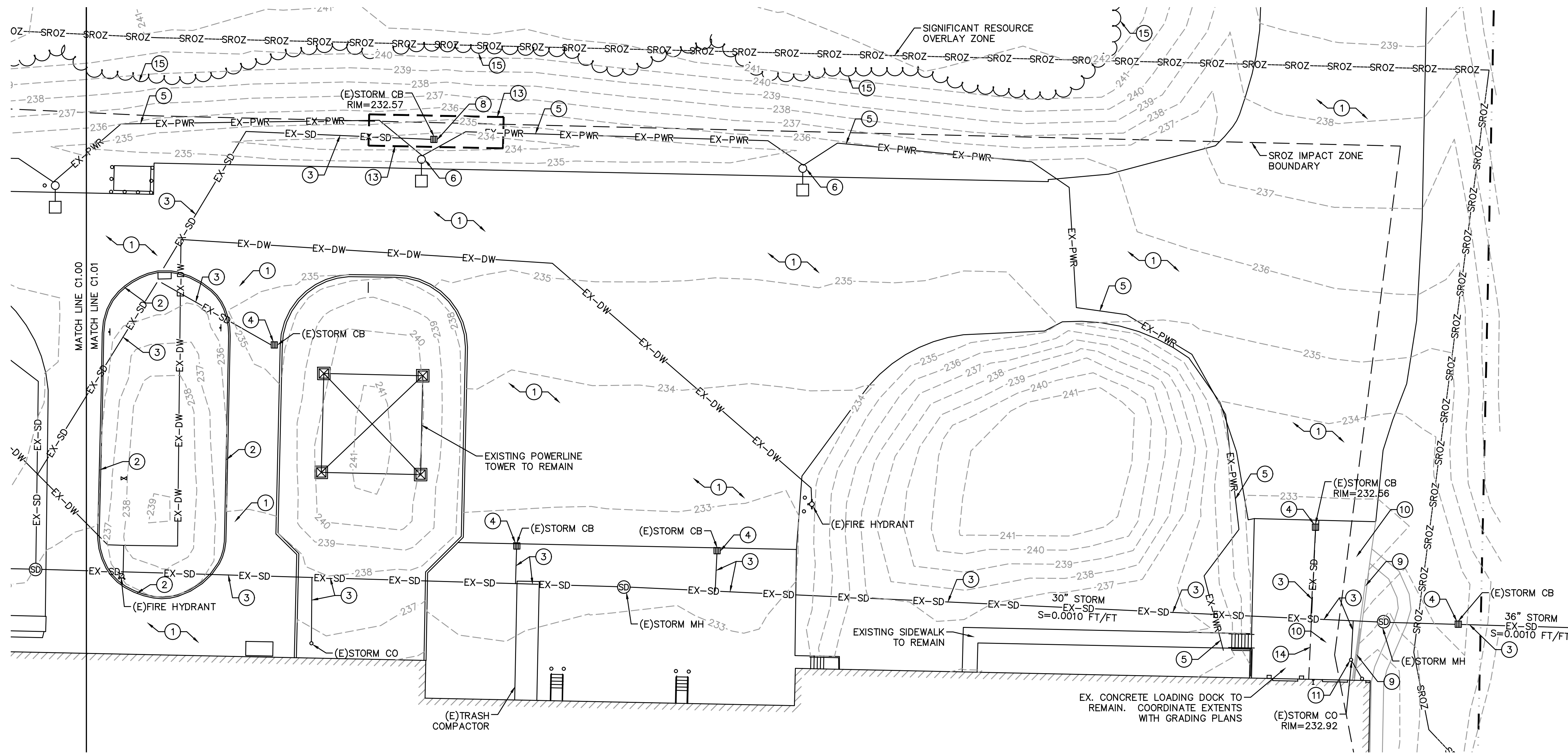
APPROVALS:

Job No.: 21032-0041
Proj. Manager: RLL
Designed: KLE
Reviewed: RLL
Drawn: KLE
Dwg. Checked: RLL
Scale: AS SHOWN

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
EXISTING CONDITIONS AND DEMOLITION PLAN - EAST



SHEET NO.
C1.01



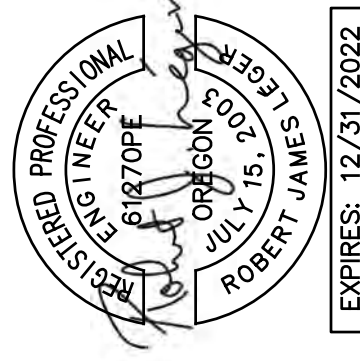
EXISTING CONDITIONS/DEMOLITION GENERAL NOTES:

1. THE CONTRACTOR SHALL BE REQUIRED TO VISIT SITE PRIOR TO PREBID MEETING TO FAMILIARIZE THEMSELVES WITH DEMOLITION, GRADING, ETC., AND IMPROVEMENTS TO REMAIN.
2. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ANY AND ALL ITEMS NOT OTHERWISE LISTED HEREIN THAT CONFLICT WITH THE CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL CONTACT ENGINEER OF RECORD IMMEDIATELY TO DETERMINE IF ANY ITEMS NOT SHOWN ON THE PLANS MUST BE REMOVED. FAILURE TO DO SO DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY AND COST FOR REMOVING ITEMS REQUIRED.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING (IF APPLICABLE) ALL KNOWN ENVIRONMENTAL INVESTIGATION STUDIES AND REPORTS PRIOR TO BIDDING. REPORTS ARE INCLUDED IN THE PROJECTS SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH THE ENVIRONMENTAL ENGINEER ON EXACT AREAS OF CONTAMINATION, IF ANY.
4. THE CONTRACTOR SHALL TAKE EFFECTIVE ACTION TO PREVENT THE FORMATION OF ANY AIRBORNE DUST NUISANCE, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM FAILURE TO FOLLOW THE EROSION & SEDIMENT CONTROL GUIDELINES.
5. ALL EXISTING REMAINING UTILITIES AND REMAINING IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE LOCAL AGENCY AND THE ENGINEER AT THE CONTRACTOR'S SOLE EXPENSE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DOCUMENT PRIOR DAMAGES.
6. DO NOT CUT ANY ROOTS OVER 3". ROOTS THAT ARE CUT SHALL RESULT IN A FLAT SURFACE WITH ADJACENT BARK FIRMLY ATTACHED. DO NOT TEAR OR CRUSH ROOTS.
7. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
8. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
9. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
10. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
11. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

LEGEND

-  INFILTRATION FACILITY PROTECTION AREA (DO NOT COMPACT NATIVE SOILS AT FACILITY SUBGRADE ELEVATION)
-  **EXISTING CONDITIONS/DEMOLITION KEYNOTES:**
 1. PRESERVE AND PROTECT EXISTING ASPHALT CONCRETE PAVEMENT AREA.
 2. PRESERVE AND PROTECT EXISTING CONCRETE CURB.
 3. PRESERVE AND PROTECT EXISTING STORMWATER LINE.
 4. PRESERVE AND PROTECT EXISTING STORMWATER CATCH BASIN.
 5. PRESERVE AND PROTECT EXISTING UNDERGROUND POWER LINE AND CONDUITS.
 6. PRESERVE AND PROTECT EXISTING LIGHT POST AND BASE.
 7. PRESERVE AND PROTECT EXISTING ELECTRICAL STRUCTURE AND BOLLARDS.
 8. REMOVE EXISTING STORMWATER CATCH BASIN. PRESERVE CONNECTING EXISTING STORMWATER LINE FOR RE-CONNECTION.
 9. COORDINATE REMOVAL OF EXISTING RETAINING WALL AND GUARDRAIL AT PROPOSED RAMP LOCATION.
 10. COORDINATE REMOVAL OF EXISTING CONCRETE DOCK AT PROPOSED RAMP LOCATION WITH THE GRADING DETAIL AND LAYOUT PLAN WITHIN THE CIVIL PLAN SET.
 11. PRESERVE AND PROTECT EXISTING STORMWATER CLEANOUT WITHIN PROPOSED RAMP AREA. CLEANOUT SHALL BE RAISED TO MATCH FINISH GRADE.
 12. REMOVE EXISTING BASKETBALL HOOP AND POLE. PRESERVE AND RETURN TO OWNER. FILL IN POLE HOLE WITH HMAC OR WMAC PATCH. COLD PATCHING IS NOT ALLOWED.
 13. PRESERVE AND PROTECT NEW INFILTRATION FACILITY AREA. DO NOT COMPACT SOILS, HANDLE HEAVY MACHINERY, OR USE FOR STORAGE WITHIN THE BOUNDARY OF THE FACILITY.
 14. SAWCUT 9" MIN., 12" MAX. FROM FACE OF NEW RAMP WALL FOR FOOTING.
 15. PRESERVE AND PROTECT EXISTING TREES AND SHRUBS AT TREE LINE. SEE EROSION CONTROL PLAN, SHEET ESC9.00 FOR TREE PROTECTION REQUIREMENTS.

PREPARED BY:
MDCI
ENGINEERS
 921 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.MDCIENGINEERS.COM
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SIGNATURE:

 EXPIRES: 12/31/2022

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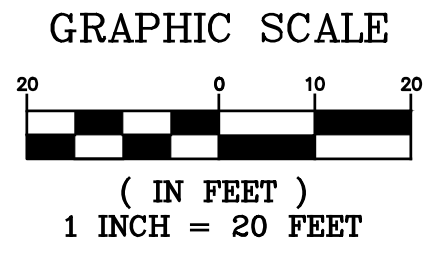
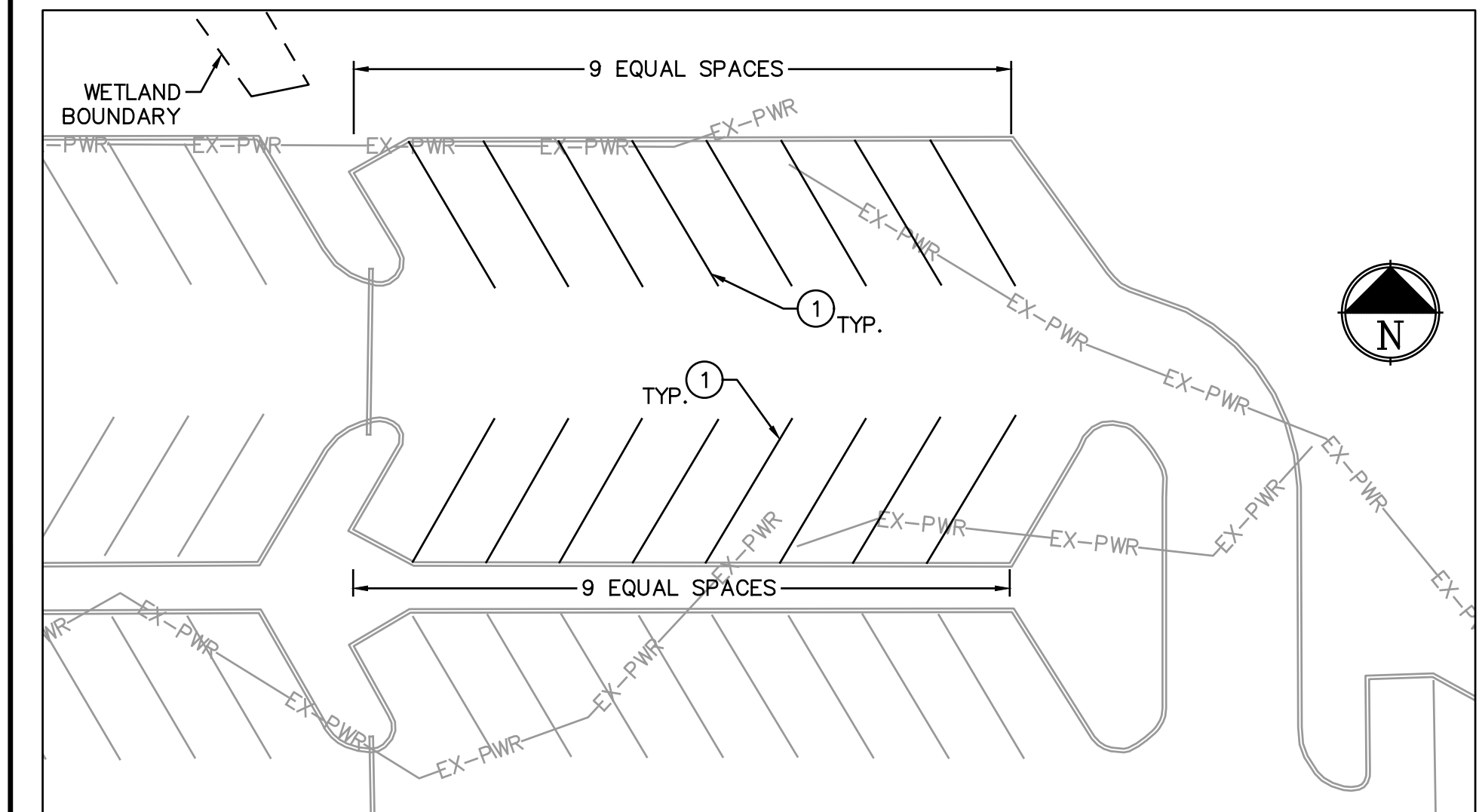
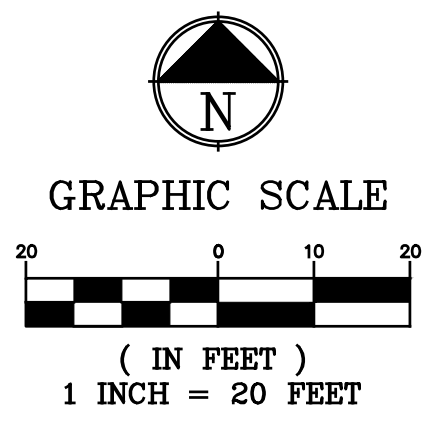
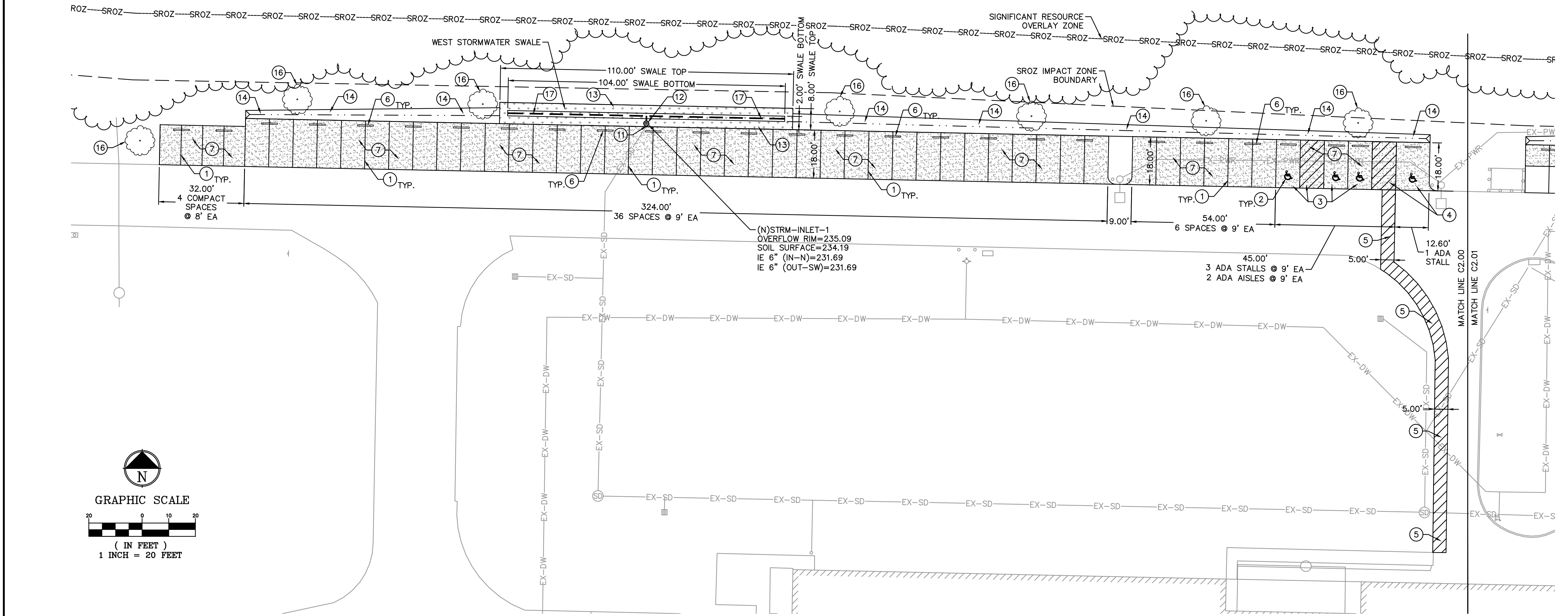
APPROVALS:

Job No.: 21032-0041
Proj. Manager: R.J.L.
Designed: K.L.E.
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Drawn: K.L.E.
Dwg. Checked: R.J.L.
Scale: AS SHOWN

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
SITE LAYOUT AND STORMWATER PLAN - WEST

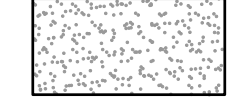
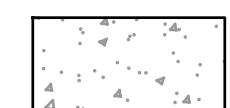
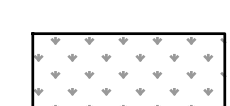
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SITE LAYOUT AND STORMWATER GENERAL NOTES:

1. TRAFFIC CONTROL FOR THE SITE SHALL FOLLOW THE PROVISIONS IN THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. SIDEWALK CROSS SLOPES SHALL BE 1.5% MAXIMUM TOWARDS THE PARKING FIELD, WHERE APPLICABLE.
3. REFER TO LANDSCAPING NOTES ON SHEET C4.00 FOR LANDSCAPE REQUIREMENTS.
4. ALL DRAINAGE AND UTILITY STRUCTURES SHALL BE INSTALLED SO THAT RIM ELEVATIONS CAN BE ADJUSTED TO MATCH FINISHED GRADE.
5. SWALE DIMENSIONS SHOWN ARE TO BOTTOM OF SWALE, UNLESS INDICATED OTHERWISE.
6. IN AREAS WHERE STORMWATER LINES ARE LESS THAN 36", THE STORMWATER LINE SHALL BE COMPRISED OF DUCTILE IRON, CLASS-51 CEMENT LINED PIPE (DI CL-51).

LEGEND

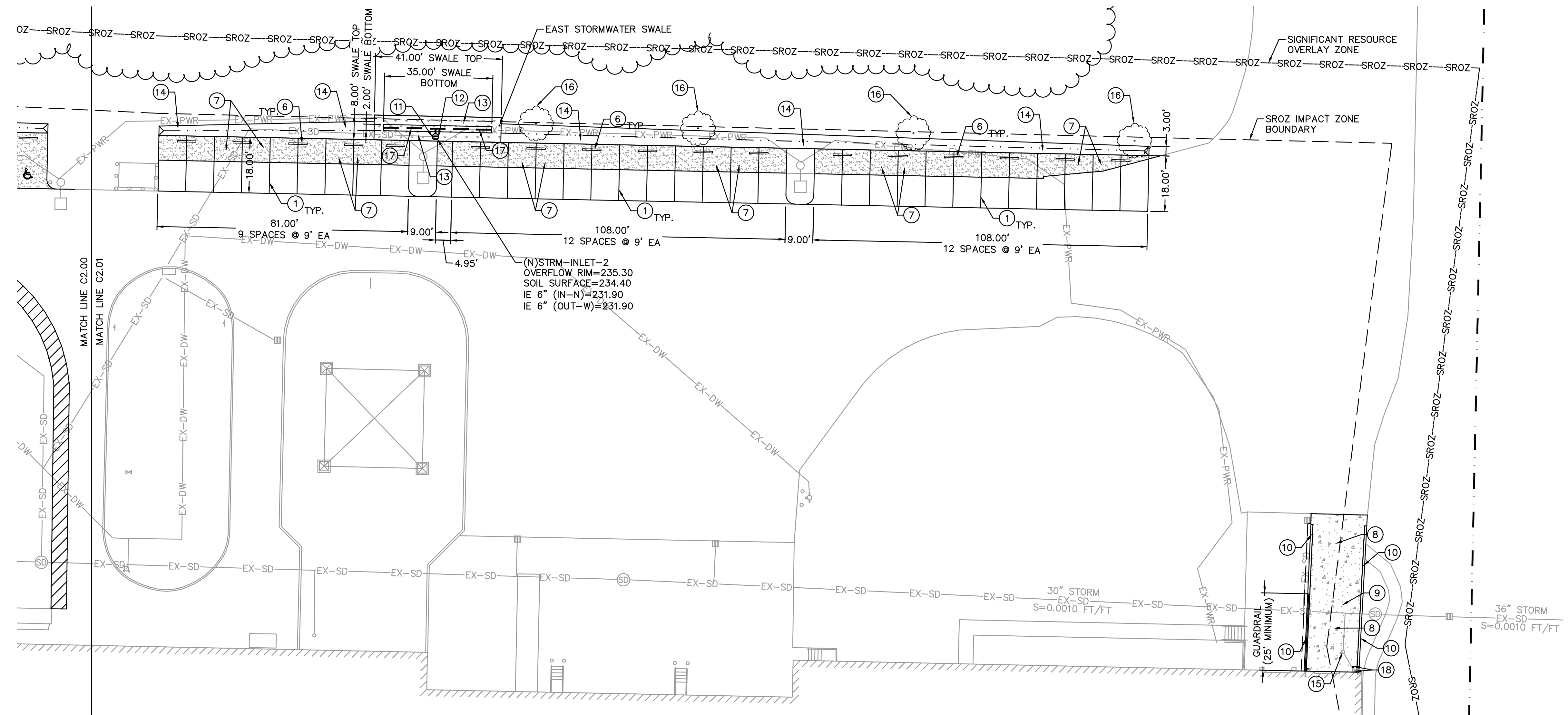
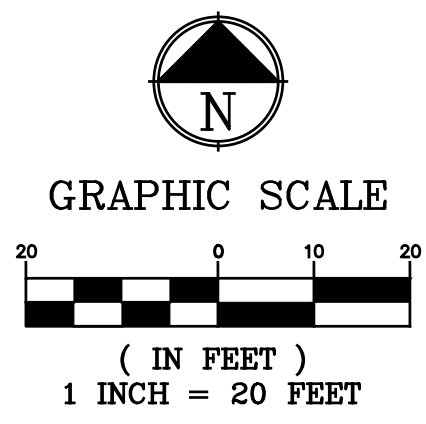
-  NEW ASPHALT CONCRETE PAVEMENT AREA
-  NEW PORTLAND CEMENT CONCRETE AREA
-  NEW VEGETATED SWALE AREA

ⓧ SITE LAYOUT AND STORMWATER KEYNOTES:

1. PAINT NEW 4" WIDE, WHITE STRIPE.
2. PAINT NEW ADA WHEELCHAIR SYMBOL. SEE DETAIL 1/C5.00.
3. CONSTRUCT NEW ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
4. CONSTRUCT NEW VAN-ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
5. PAINT NEW ACCESSIBLE PATH. STRIPING SHALL BE COMPRISED OF 4" WIDE, WHITE STRIPES AT A 45° ANGLE, SPACED 2' ON CENTER, WITH 4" WIDE, WHITE CONTINUOUS STRIPING ALONG EDGES. PATH SHALL BE 5' WIDE.
6. INSTALL CONCRETE WHEELSTOP, 5' LONG, 8" WIDE. CENTER BETWEEN SPACES AND SECURE TO PAVEMENT.
7. CONSTRUCT ASPHALT CONCRETE PAVEMENT SECTION. SEE DETAIL 3/C5.00 AND CITY OF WILSONVILLE DRAWING NUMBER RD-1170/C5.00.
8. CONSTRUCT NEW THICKENED PORTLAND CEMENT CONCRETE PAVEMENT SECTION. SEE DETAIL 2/C5.00.
9. CONSTRUCT NEW RAMP PER GRADING DETAILS ON SHEET C3.10.
10. CONSTRUCT NEW STRUCTURAL WALL AND GUARDRAIL ALONG RAMP PER DETAIL 1/C5.01.
11. CONNECT EXISTING STORMWATER LINES TO THE NEW CATCH BASIN USING APPROVED PREMANUFACTURED FITTINGS.
12. CONSTRUCT NEW 24" DIAMETER NYLOPLAST OVERFLOW INLET WITH GRATE PER CITY OF WILSONVILLE DRAWING NUMBER S-2112/C5.00. 6" UNDERDRAIN PIPES SHALL CONNECT TO THE NEW BASIN WITH REMOVABLE CAPS WITH 1" DRILLED ORIFICES.
13. CONSTRUCT UNLINED STORMWATER SWALE PER CITY OF WILSONVILLE DRAWING NUMBER ST-6045/C5.01. SIDE SLOPES SHALL BE 3H:1V, MAXIMUM. AREAS WITHIN SWALE BASINS SHALL BE PROTECTED FROM USE AS CONSTRUCTION STORAGE AREAS AND OVER-COMPACTION BY EQUIPMENT THROUGHOUT THE CONSTRUCTION PERIOD.
14. CONSTRUCT STORMWATER CHANNEL FOR RUNOFF PER GRADING PLANS C3.00 AND C3.01. SEE CROSS SECTION DETAIL, SHEET C3.10.
15. ADJUST EXISTING STORMWATER CLEANOUT RIM IN NEW RAMP TO FINISH GRADE.
16. INSTALL NEW TREE PER CITY OF WILSONVILLE DRAWING NUMBER P-5000/C5.01. TREE SHALL BE 1" CALIPER MINIMUM TILIA CORDATA, LITTLELEAF LINDEN.
17. CONSTRUCT NEW 6" PERFORATED PVC UNDERDRAIN LINE BENEATH STORMWATER SWALE. CONNECT TO OVERFLOW INLET USING APPROVED FITTINGS. UNDERDRAIN SHALL BE EMBEDDED IN DRAIN ROCK SECTION, WITH INVERT ELEVATION BEING APPROXIMATELY 2.50' BELOW SOIL SURFACE.
18. EXTERIOR DOWNSPOUT LINE TO REMAIN. INSTALL CONCRETE FILLED BOLLARD OR OTHER PROTECTION.

File Location: O:\0320-PortlandDCI\021\21032-0041 ESS Inc\DRAWINGS\0320-0041_LAYOUT-STRM-PLAN.dwg
 Plot Date: 2022-12-15
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SITE LAYOUT AND STORMWATER GENERAL NOTES:

1. TRAFFIC CONTROL FOR THE SITE SHALL FOLLOW THE PROVISIONS IN THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. SIDEWALK CROSS SLOPES SHALL BE 1.5% MAXIMUM TOWARDS THE PARKING FIELD, WHERE APPLICABLE.
3. REFER TO LANDSCAPING NOTES ON SHEET C4.00 FOR LANDSCAPE REQUIREMENTS.
4. ALL DRAINAGE AND UTILITY STRUCTURES SHALL BE INSTALLED SO THAT RIM ELEVATIONS CAN BE ADJUSTED TO MATCH FINISHED GRADE.
5. SWALE DIMENSIONS SHOWN ARE TO BOTTOM OF SWALE, UNLESS INDICATED OTHERWISE.
6. IN AREAS WHERE STORMWATER LINES ARE LESS THAN 36", THE STORMWATER LINE SHALL BE COMPRISED OF DUCTILE IRON, CLASS-51 CEMENT LINED PIPE (DI CL-51).

LEGEND

- NEW ASPHALT CONCRETE PAVEMENT AREA
- NEW PORTLAND CEMENT CONCRETE AREA
- NEW VEGETATED SWALE AREA

(X) SITE LAYOUT AND STORMWATER KEYNOTES:

1. PAINT NEW 4" WIDE, WHITE STRIPE.
2. PAINT NEW ADA WHEELCHAIR SYMBOL. SEE DETAIL 1/C5.00.
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14. CONSTRUCT STORMWATER CHANNEL FOR RUNOFF PER GRADING PLANS C3.00 AND C3.01. SEE CROSS SECTION DETAIL, SHEET C3.10.
15. ADJUST EXISTING STORMWATER CLEANOUT RIM IN NEW RAMP TO FINISH GRADE.
16. INSTALL NEW TREE PER CITY OF WILSONVILLE DRAWING NUMBER P-5000/C5.01. TREE SHALL BE 1" CALIPER MINIMUM TILIA CORDATA, LITTLELEAF LINDEN.
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18. EXTERIOR DOWNSPOUT LINE TO REMAIN. INSTALL CONCRETE FILLED BOLLARD OR OTHER PROTECTION.

PREPARED BY:

921 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.IDCIENGINEERS.COM
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SIGNATURE:

ROBERT JAMES STEFFER
 JULY 15, 2003
 EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041
Proj. Manager: R.J.L.
Designed: K.L.E.
Reviewed: R.L.L.
Drawn: K.L.E.
Dwg. Checked: R.J.L.
Scale: AS SHOWN

PROJECT TITLE:

ESS INC. SITE IMPROVEMENTS

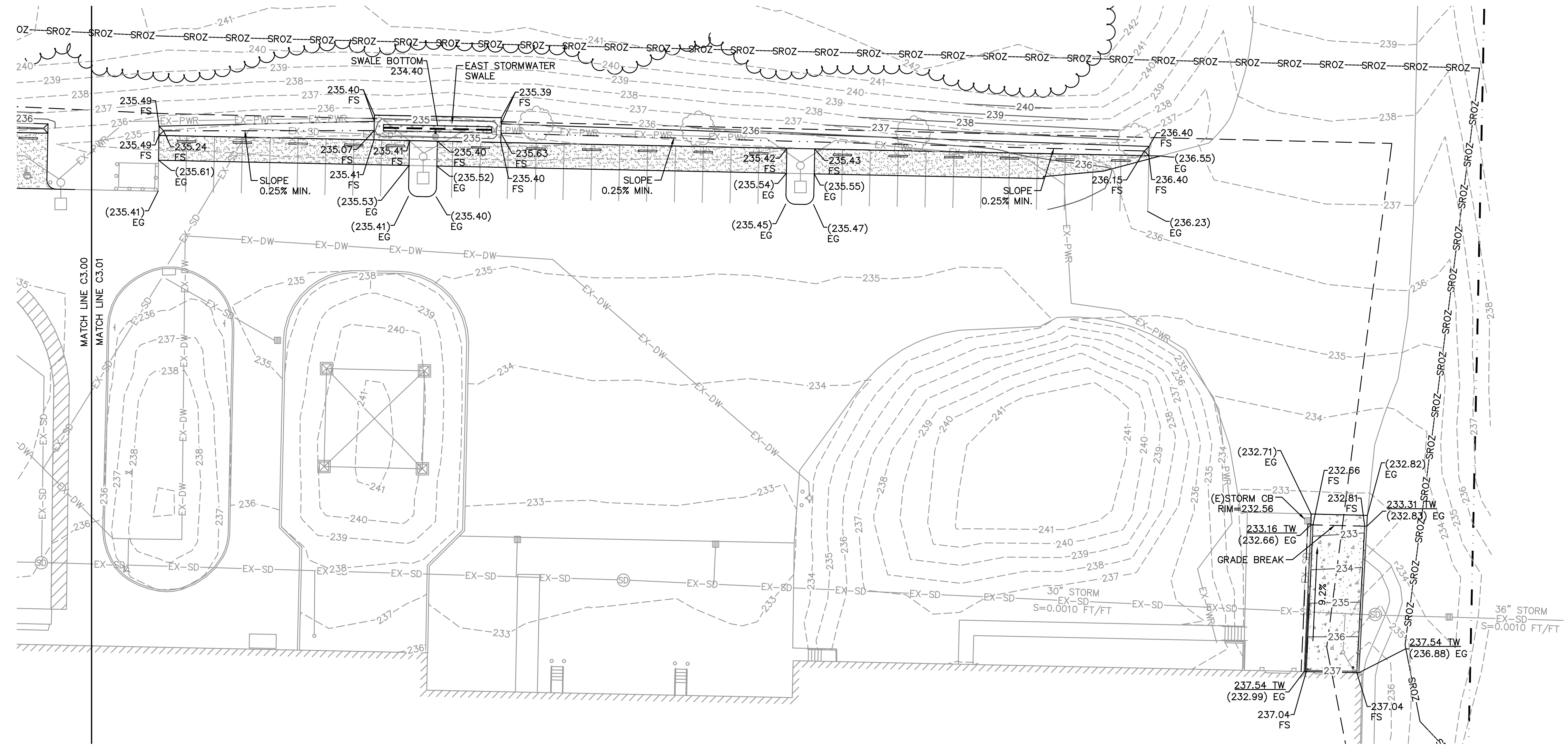
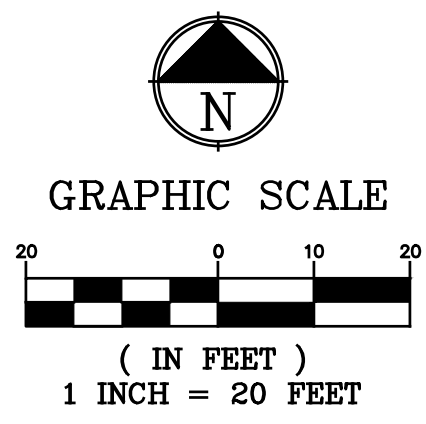
SHEET TITLE:

SITE LAYOUT AND STORMWATER PLAN - EAST

SHEET NO.

C2.01

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GRADING GENERAL NOTES:

1. TRAFFIC CONTROL FOR THE SITE SHALL FOLLOW THE PROVISIONS IN THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. SIDEWALK AND ACCESSIBLE STRIPED PATH CROSS SLOPES SHALL NOT EXCEED 1.5% CROSS SLOPE, WHERE APPLICABLE. NOTIFY ENGINEER IF ANY DISCREPANCIES OCCUR.
3. ADA AREAS SHALL NOT EXCEED 1.8% IN ANY DIRECTION.
4. REFER TO LANDSCAPING NOTES ON SHEET C4.00 FOR LANDSCAPE REQUIREMENTS.
5. ALL DRAINAGE AND UTILITY STRUCTURES SHALL BE INSTALLED SO THAT RIM ELEVATIONS CAN BE ADJUSTED TO MATCH FINISHED GRADE.
6. ESTIMATED RAMP TIE-IN ELEVATION IS 237.04. CONTRACTOR SHALL VERIFY RAMP TIE-IN ELEVATION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES.

LEGEND

- NEW ASPHALT CONCRETE PAVEMENT AREA
- NEW PORTLAND CEMENT CONCRETE AREA
- NEW VEGETATED SWALE AREA

PREPARED BY:

921 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.DCCIENGINEERS.COM
 CIVIL / STRUCTURAL

SIGNATURE:

ROBERT JAMES STEFF
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 OREGON
 JULY 15, 2003

EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041
Proj. Manager: R.JL
Designed: KLE
Reviewed: R.JL
Drawn: KLE
Dwg. Checked: R.JL
Scale: AS SHOWN

PROJECT TITLE:

ESS INC. SITE IMPROVEMENTS

SHEET TITLE:

GRADING PLAN – EAST

SHEET NO.

C3.01

SIGNAGE NOTES:

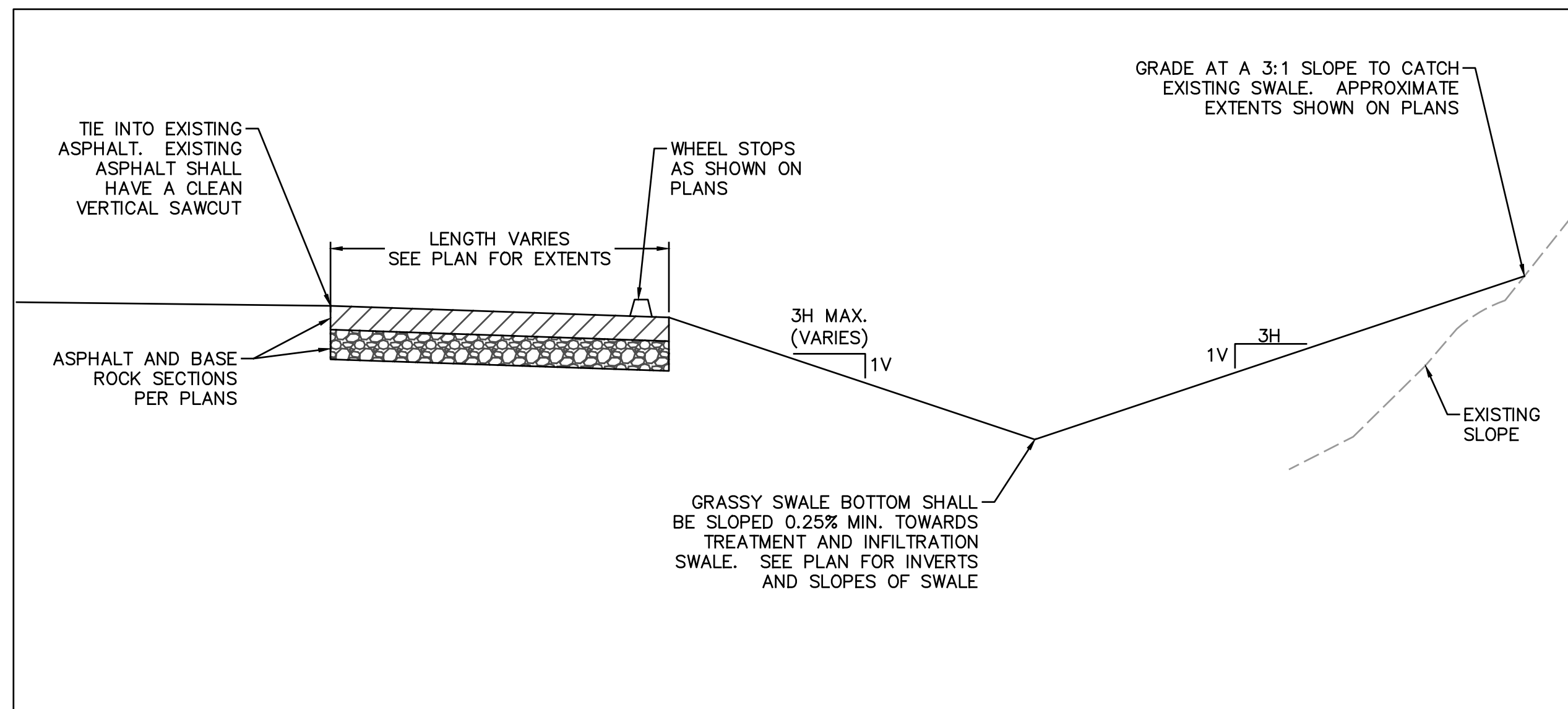
301.12.03 SIGNAGE REQUIREMENTS

INFORMATIONAL SIGNAGE IS REQUIRED FOR SOME SITE USES AND ACTIVITIES THAT HAVE THE POTENTIAL TO CONTAMINATE STORMWATER. SIGNAGE ADDRESSES GOOD HOUSEKEEPING RULES AND PROVIDES EMERGENCY RESPONSE MEASURES IN CASE OF AN ACCIDENTAL SPILL.

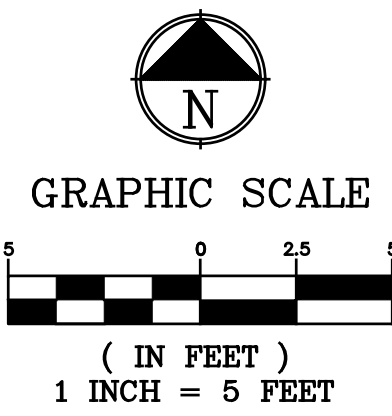
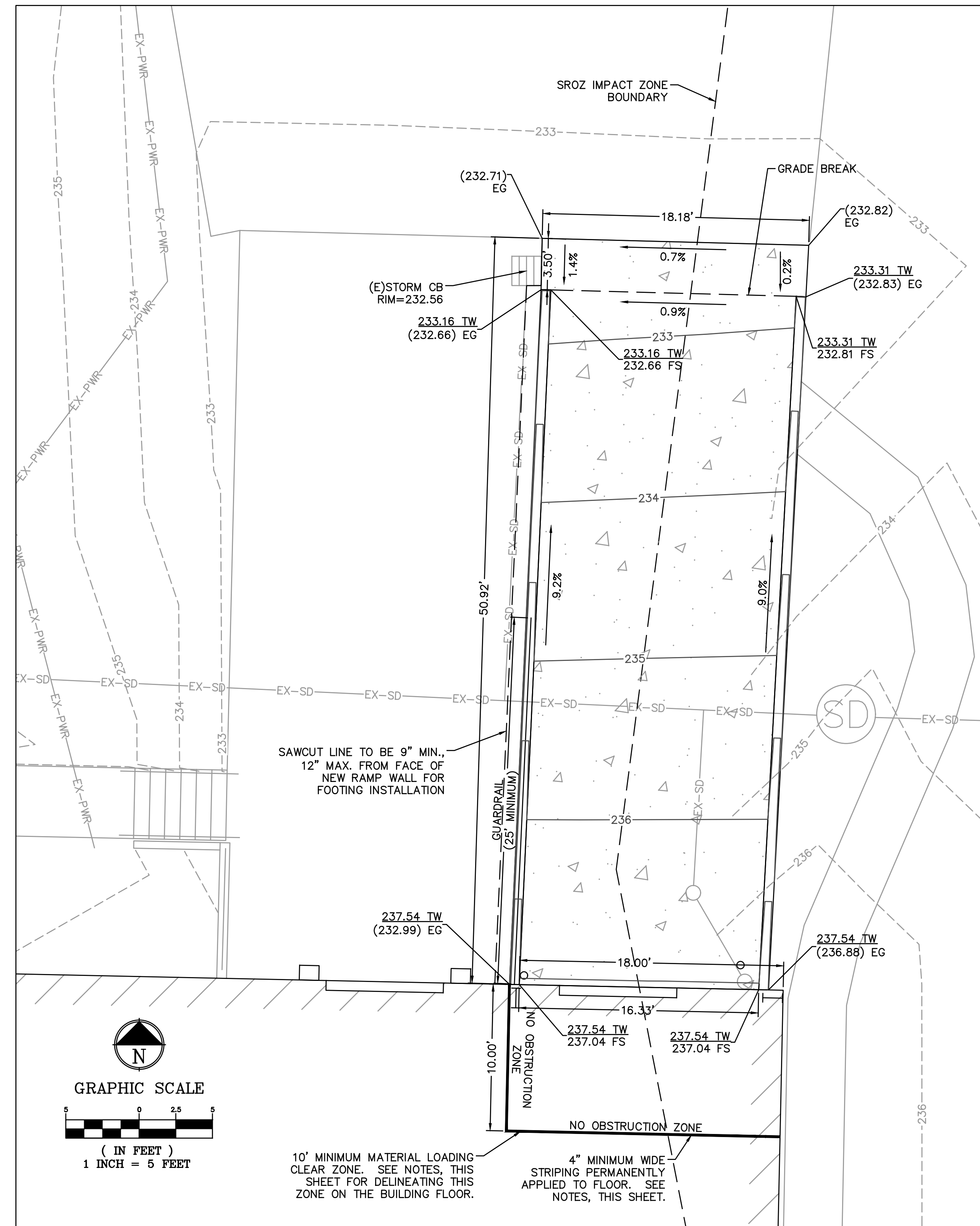
- a. SIGNS SHALL BE LOCATED AND PLAINLY VISIBLE FROM ALL ACTIVITY AREAS. MORE THAN ONE SIGN MAY BE NEEDED TO ACCOMMODATE LARGER ACTIVITY AREAS. SIGNS SHALL BE WATER-RESISTANT. THEY SHALL INCLUDE THE FOLLOWING INFORMATION:
 - 1. SAFETY PRECAUTIONS
 - 2. IMMEDIATE SPILL RESPONSE PROCEDURES—FOR EXAMPLE: 'TURN THE VALVE LOCATED AT...' OR 'USE ABSORBENT MATERIALS'.
 - 3. EMERGENCY CONTACT(S) AND TELEPHONE NUMBER(S).
- b. SIGNS MAY NEED TO BE IN MORE THAN ONE LANGUAGE IF REQUIRED TO EFFECTIVELY COMMUNICATE WITH EMPLOYEES AND DELIVERY PERSONNEL.
- c. ANY APPLICABLE SPILL RESPONSE SUPPLIES NEED TO BE CLEARLY MARKED AND LOCATED WHERE THE SIGNAGE IS POSTED AND NEAR THE HIGH-RISK ACTIVITY AREA. MORE THAN ONE SPILL RESPONSE KIT MAY BE NECESSARY TO ACCOMMODATE LARGER ACTIVITY AREAS.

GRADE DOOR WITH RAMP MAY BE USED AS A MATERIAL TRANSFER AREA. ALL MATERIAL TRANSFERS SHALL OCCUR **INSIDE** THE BUILDING. INTERIOR TRANSFER AREA SHALL COMPLY WITH THE REQUIREMENTS NOTED BELOW:

BAY DOORS AND OTHER INTERIOR TRANSFER AREAS SHALL PROVIDE A 10-FOOT 'NO OBSTRUCTION ZONE' BEYOND THE ENTRANCE WITHIN THE BUILDING. THIS WILL ALLOW THE TRANSFER OF MATERIALS TO OCCUR WITH THE TRUCK OR TRAILER END PLACED AT LEAST 5 FEET INSIDE THE BUILDING, WITH AN ADDITIONAL STAGING AREA OF 5 FEET BEYOND THAT. THE 'NO OBSTRUCTION' ZONE SHALL BE CLEARLY IDENTIFIED ON THE STORMWATER MANAGEMENT PLAN AT THE TIME OF THE BUILDING PERMIT APPLICATION, AND SHALL BE PAINTED AT THE FACILITY WITH BRIGHT OR FLUORESCENT FLOOR PAINT.



TYPICAL STORMWATER CHANNEL SECTION
SCALE: NTS



RAMP DETAIL
SCALE: 1" = 5'

PREPARED BY:

921 SW WASHINGTON ST. • SUITE 560
PORTLAND, OREGON 97205
PHONE: (503) 242-2448 • FAX: (503) 242-2449
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SIGNATURE:

ROBERT JAMES STEER
PROFESSIONAL ENGINEER
STATE OF OREGON
NO. 15770
EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041
Proj. Manager: RJJ
Designed: KLE
Reviewed: RJJ
Drawn: KLE
Dwg. Checked: RJJ
Scale: AS SHOWN

PROJECT TITLE:

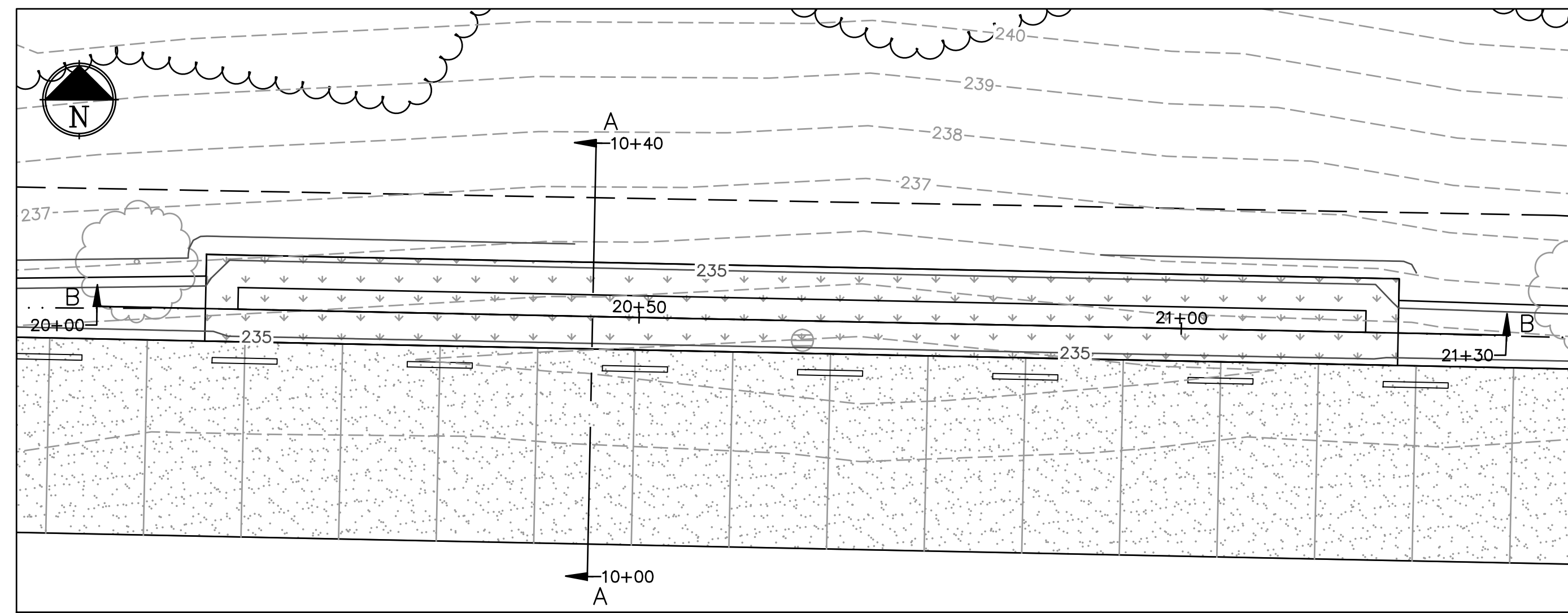
ESS INC. SITE IMPROVEMENTS

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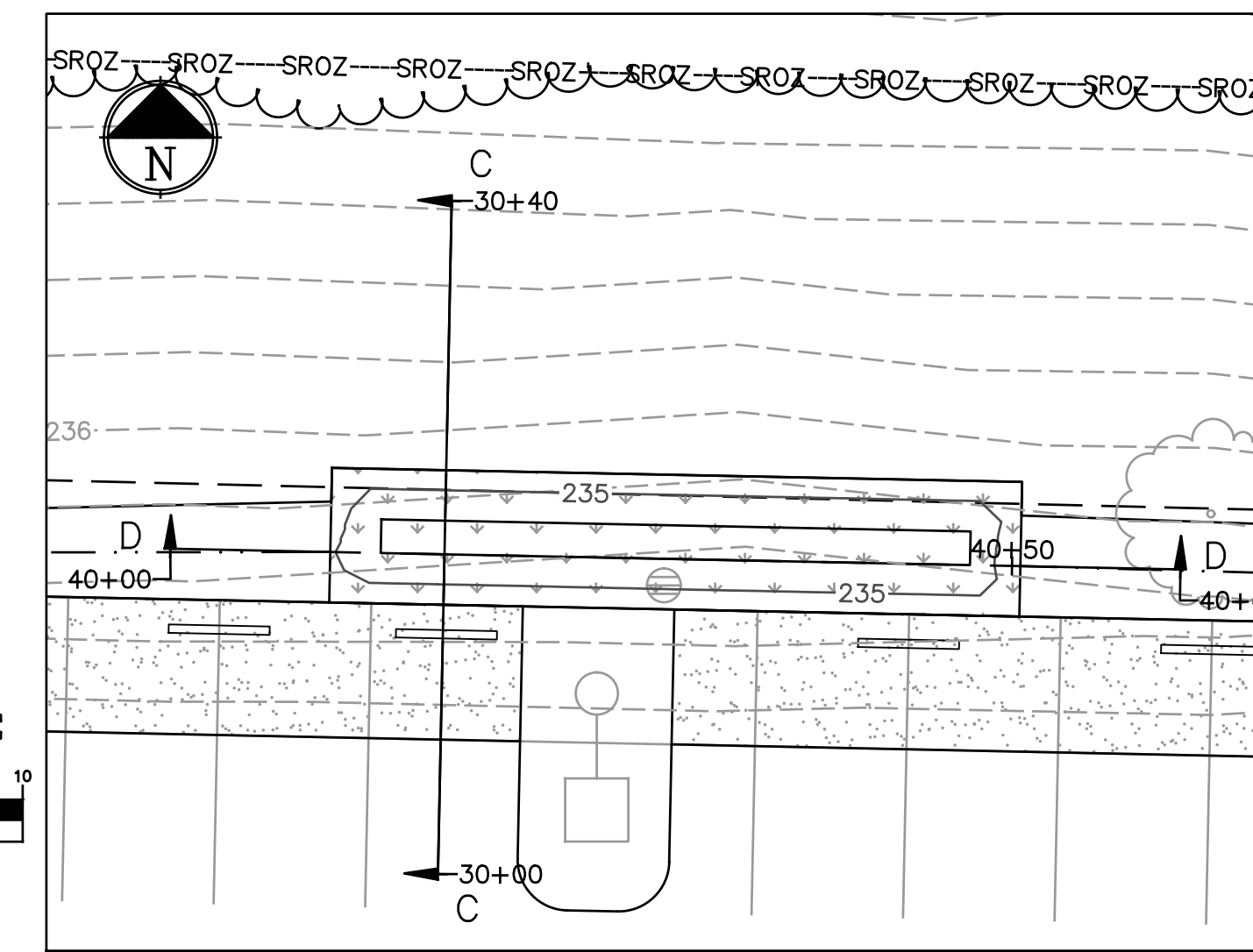
GRADING DETAILS

SHEET NO.

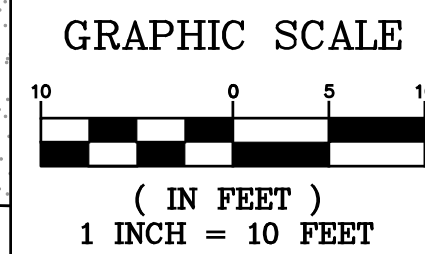
C3.10



WEST SWALE - PLAN VIEW
SCALE: 1"=10'



EAST SWALE - PLAN VIEW
SCALE: 1"=10'

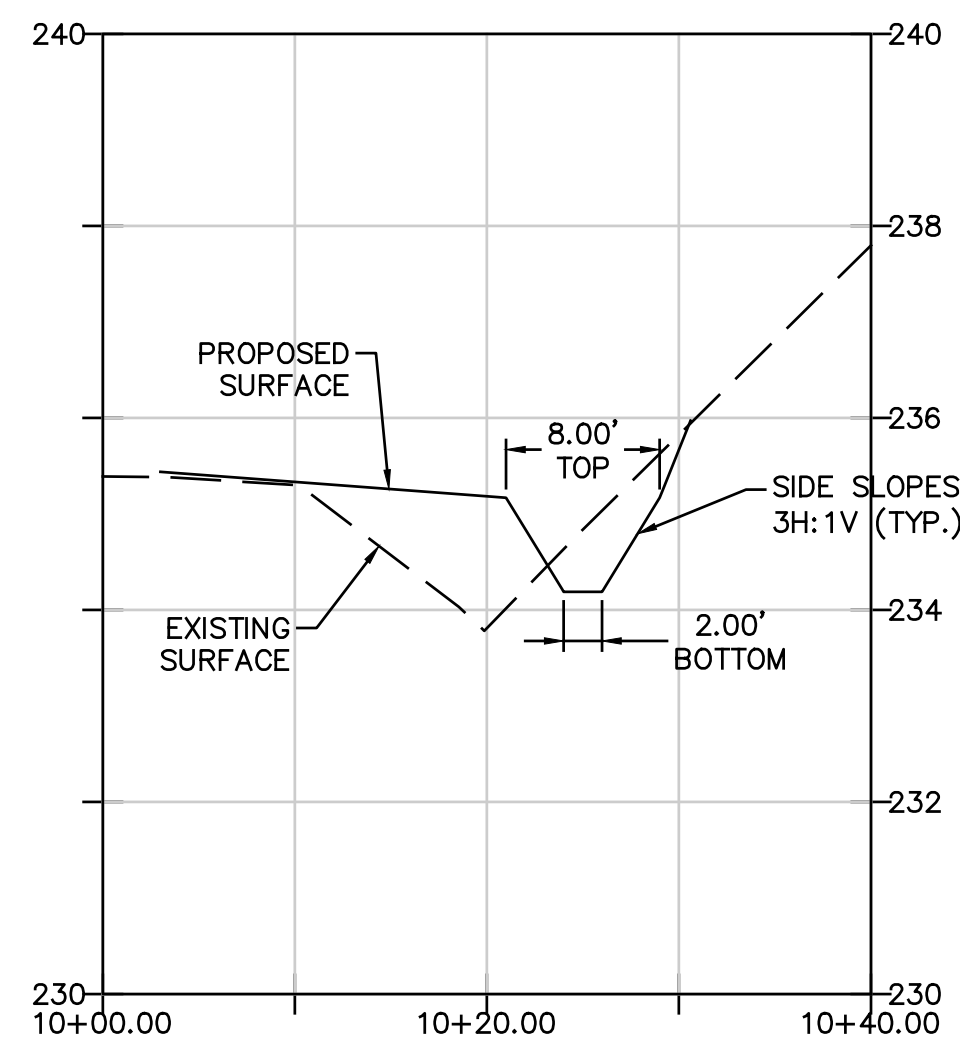


LANDSCAPING NOTES:

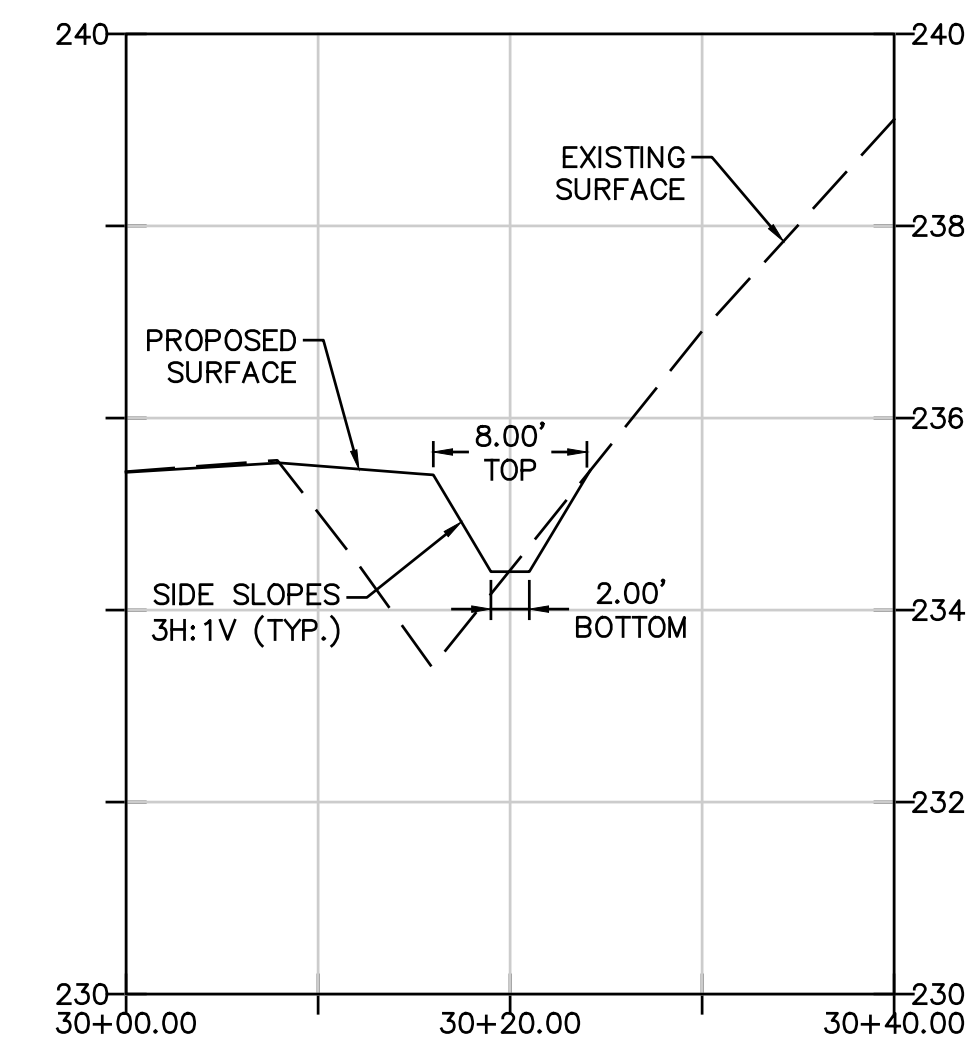
1. LANDSCAPING REQUIREMENTS PER CITY OF WILSONVILLE SECTION 3 - PUBLIC WORKS STANDARDS: STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS, 2015 ED.
2. THE WEST AND EAST SWALES ARE DESIGNATED "VEGETATED SWALE - FILTRATION" FACILITY TYPE, PER APPENDIX A OF THE STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS, SECTION A.2.06.
 - 2.1. PLANTING ZONES WITHIN THE WEST AND EAST SWALES ARE MOISTURE ZONE (A) ONLY.
3. SECTION A.3.00 PLANTING METHODS: PER PART B.3. (b), PLANT QUANTITIES FOR MOISTURE ZONE (A) ARE AS FOLLOWS, PER 100 SF OF FACILITY AREA:
 - 3.1. 3 LARGE SHRUBS/SMALL TREES
 - 3.2. 4 SMALL SHRUBS
 - 3.3. 115 GROUNDCOVER PLANTS
4. PLANTING QUANTITIES FOR WEST SWALE (SEE SWALE AREAS BELOW FOR REFERENCE):
 - 4.1. 27 LARGE SHRUBS
 - 4.2. 36 SMALL SHRUBS
 - 4.3. 1,012 GROUNDCOVER PLANTS
5. PLANTING QUANTITIES FOR EAST SWALE (SEE SWALE AREAS BELOW FOR REFERENCE):
 - 5.1. 10 LARGE SHRUBS
 - 5.2. 14 SMALL SHRUBS
 - 5.3. 378 GROUNDCOVER PLANTS
6. PLANT SPECIES:
 - 6.1. LARGE SHRUBS SHALL BE SPIREA DOUGLASII, DOUGLAS SPIRAEA.
 - 6.2. SMALL SHRUBS SHALL BE PHYSOCARPUS CAPITATUS, PACIFIC NINEBARK.
 - 6.3. GROUNDCOVER PLANTS SHALL BE CORNUS SERICEA 'KELSEYI', KELSEY DOGWOOD.
7. NOTE: SPECIES SUBSTITUTIONS ARE ALLOWED AND MUST BE SELECTED FROM APPENDIX A, TABLE A-2, OF THE STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS.
8. MINIMUM PLANT SIZES:
 - 8.1. LARGE SHRUBS: 30" HEIGHT
 - 8.2. SMALL SHRUBS/GROUNDCOVER: #1 CONTAINER
 - 8.3. HERBACEOUS PLANTS: SP #4 CONTAINER
9. CONVEYANCE SWALE LANDSCAPING SHALL BE GRASS (SEE OR SOD).

SWALE AREAS:

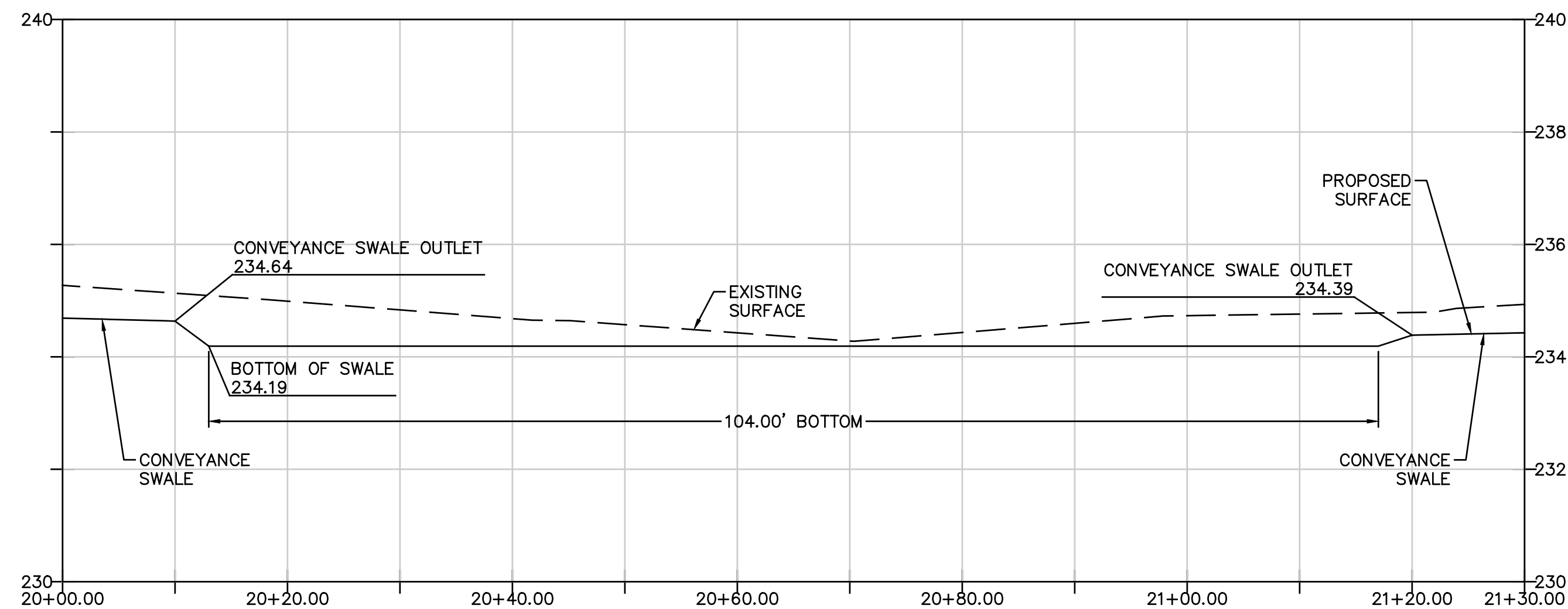
WEST SWALE: 880 SF
EAST SWALE: 328 SF



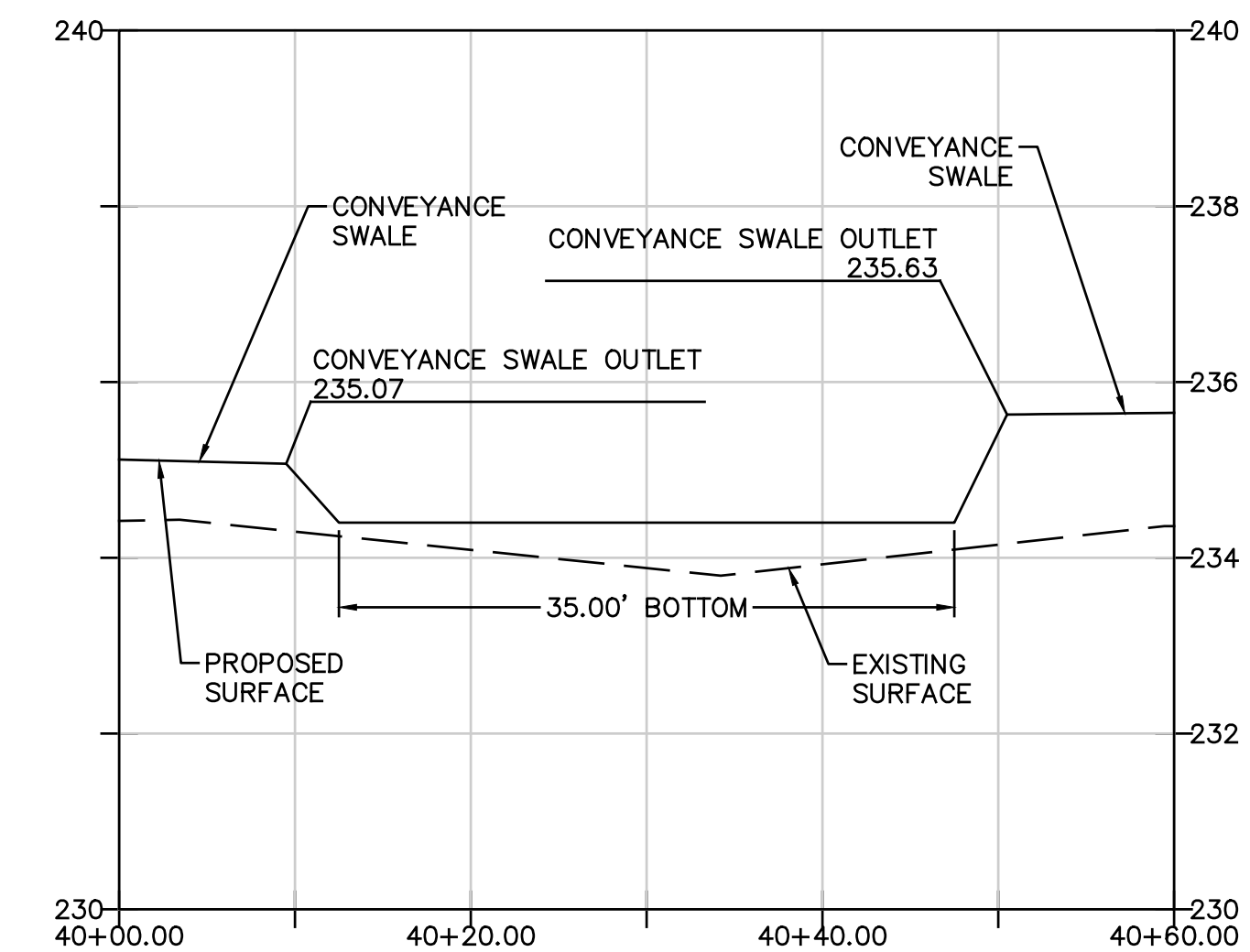
WEST SWALE - SECTION A-A
SCALE: 1"=10' H
1"=2' V



EAST SWALE - SECTION C-C
SCALE: 1"=10' H
1"=2' V



WEST SWALE - SECTION B-B
SCALE: 1"=10' H
1"=2' V



EAST SWALE - SECTION D-D
SCALE: 1"=10' H
1"=2' V

PREPARED BY: **DDCI ENGINEERS**
921 SW WASHINGTON ST. • SUITE 560
PORTLAND, OREGON 97205
PHONE: (503) 242-2448 • FAX: (503) 242-2449
WEBSITE: WWW.DDCIENGINEERS.COM
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SIGNATURE: **ROBERT JAMES STEER**
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 12/31/2022

REVISIONS:

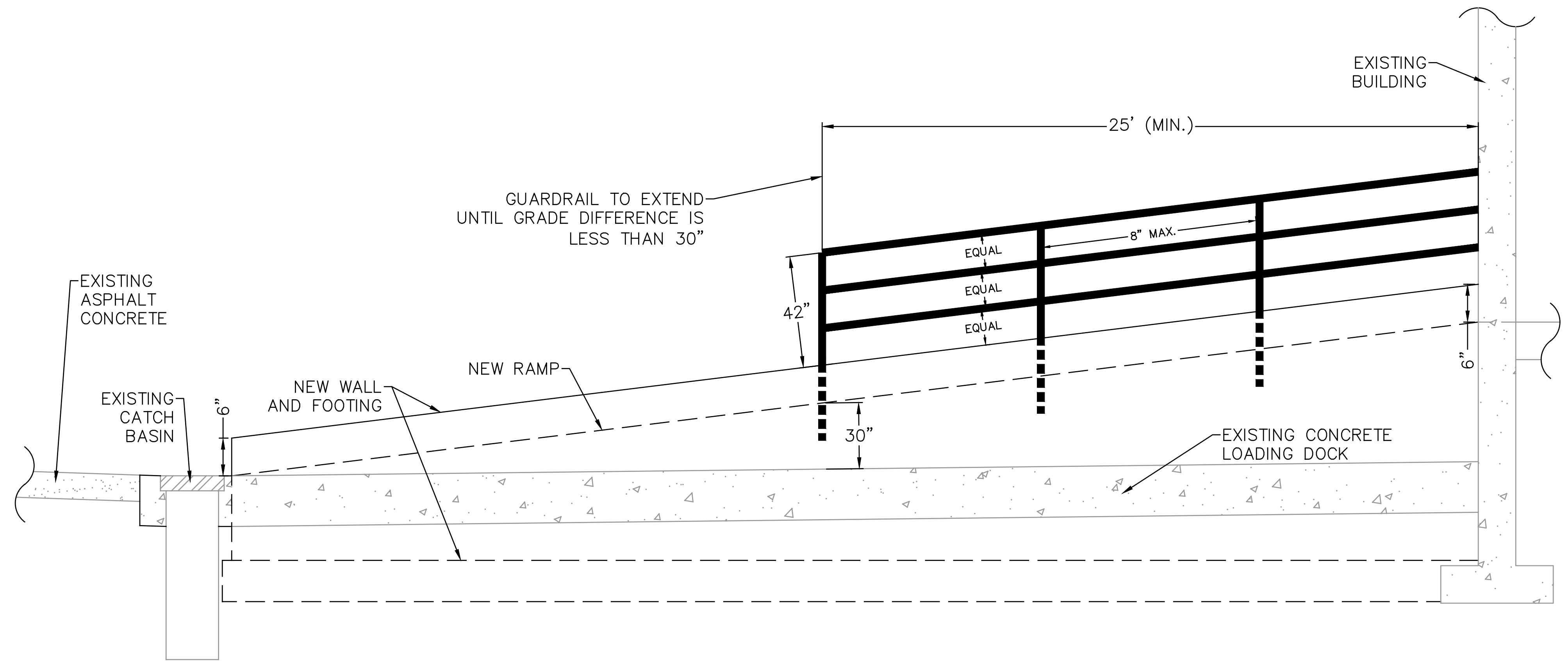
APPROVALS:

Job No.: 21032-0041	Proj. Manager: RJJ
Designed: KLE	Reviewed: RJJ
Drawn: KLE	Dwg. Checked: RJJ
Scale: AS SHOWN	

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
SWALE SECTIONS

SHEET NO.
C4.00



GUARDRAIL DETAIL
SCALE: N.T.S.

This Detail Drawing may not be altered or changed in any manner except by the City Engineer. It is the responsibility of the user to acquire the most current version.

Tree Planting Detail - B & B Trees in all Soil Types

DRAWING NUMBER: P-5000	DRAWN BY: SJ	SCALE: N.T.S.	CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
FILE NAME: P-5000.dwg	APPROVED BY: SA	DATE: 3/22/06	

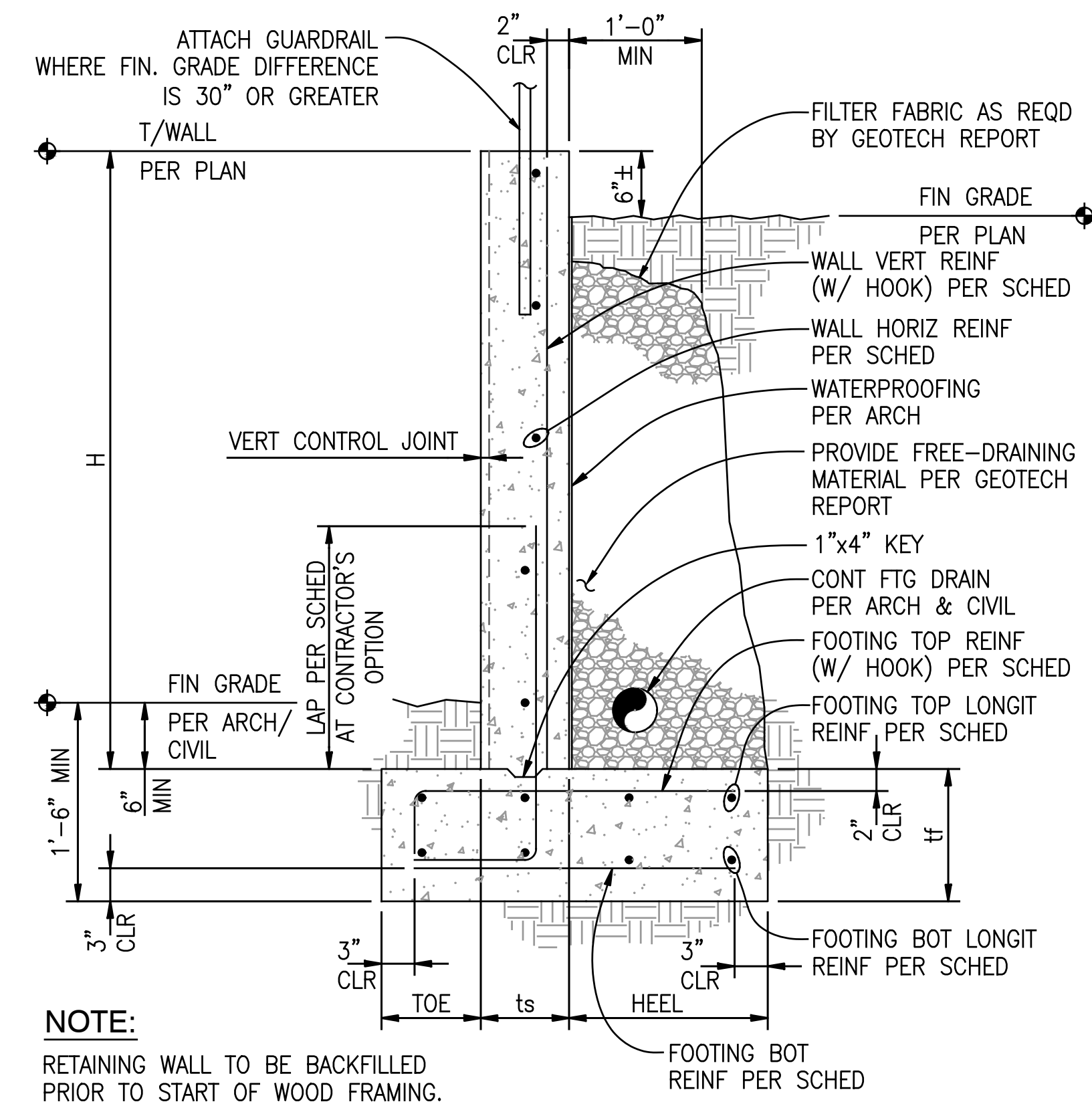
PREPARED BY: **MDCI ENGINEERS**
921 SW WASHINGTON ST. • SUITE 560
PORTLAND, OREGON 97205
PHONE: (503) 242-2448 • FAX: (503) 242-2449
WEBSITE: WWW.MDCIENGINEERS.COM
CIVIL / STRUCTURAL

SIGNATURE:

REVISIONS:

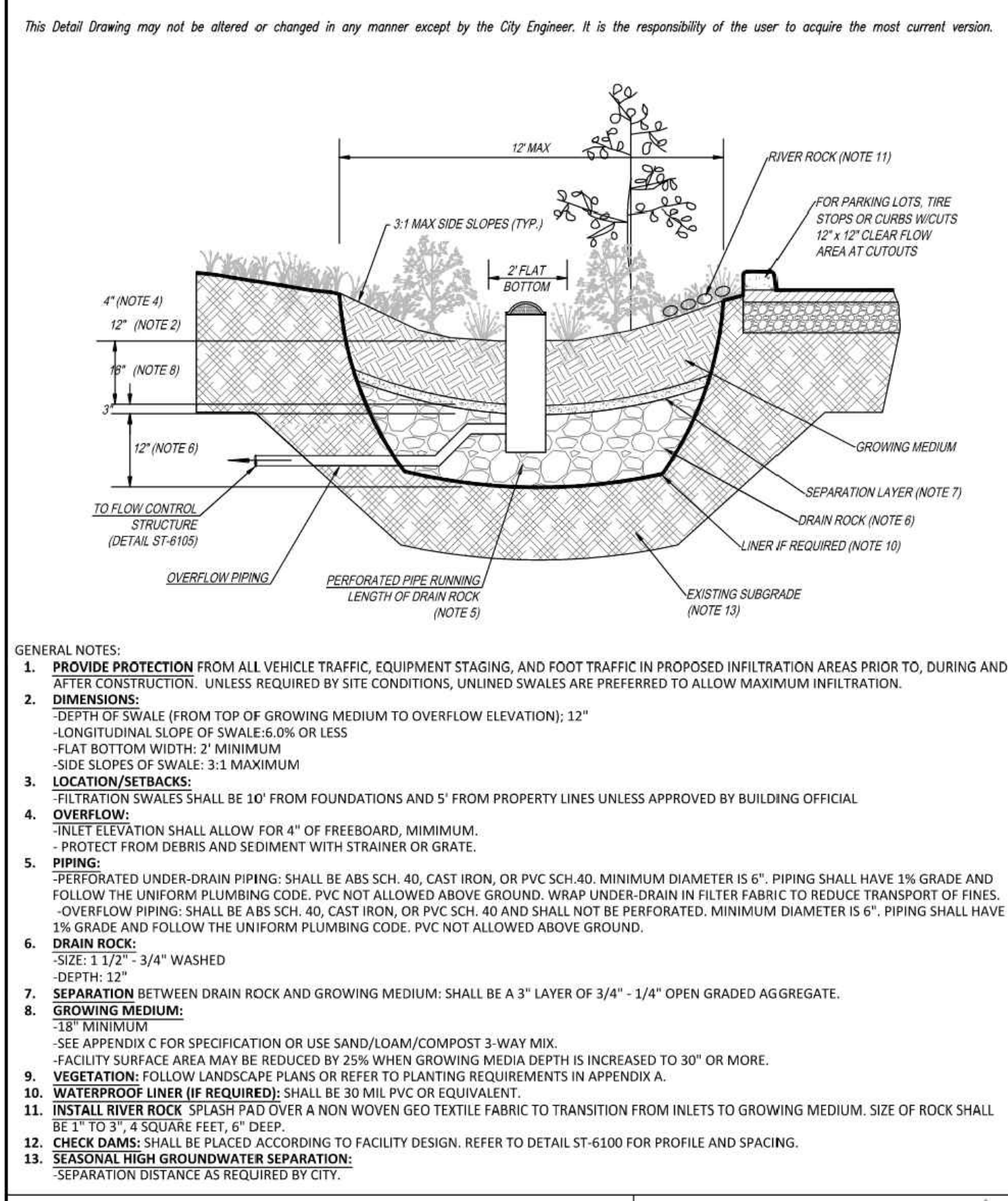
APPROVALS:

Job No.: 21032-0041
Proj. Manager: RUL
Designed: KLE
Reviewed: RUL
Drawn: KLE
Dwg. Checked: RUL
Scale: AS SHOWN



CANTILEVERED SITE RETAINING WALL AND SCHEDULE
SCALE: N.T.S.

H	WALL/FOOTING SIZES				WALL REINFORCEMENT		FOOTING REINFORCEMENT			
	TOE	ts	HEEL	tf	VERTICAL	HORIZONTAL	TOP	TOP/LONGIT	BOTTOM/LONGIT	BOTTOM
UP TO 5'-0"	9"	8"	1'-3"	12"	#4 @ 16"OC	#5 @ 18"OC	#5 @ 10"OC	(3) #4	(3) #4	#5 @ 10"OC



Vegetated Swale - Filtration

DRAWING NUMBER: ST-6045	DRAWN BY: SR	SCALE: N.T.S.	CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
FILE NAME: ST-6045.DWG	APPROVED BY: NK	DATE: 4/16/18	

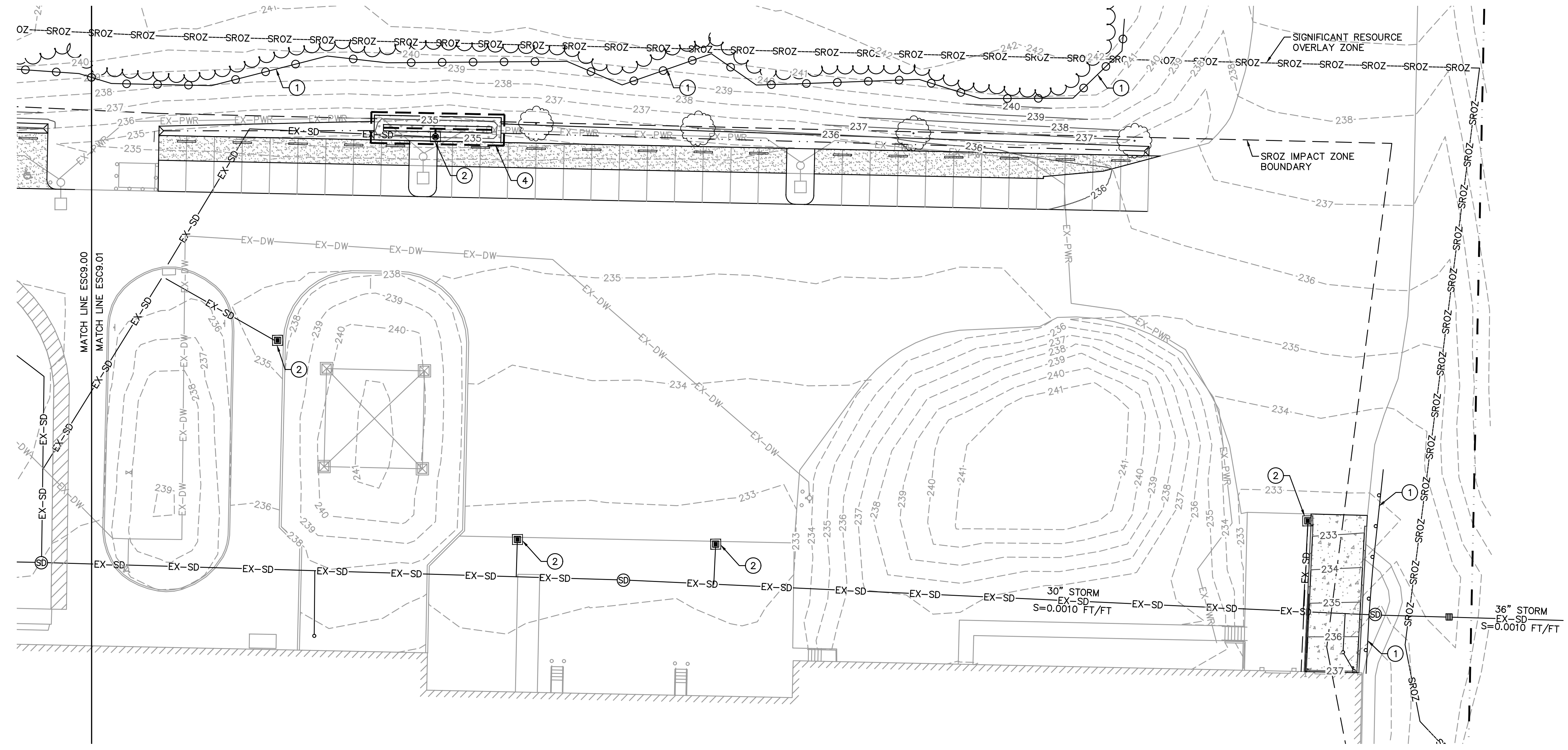
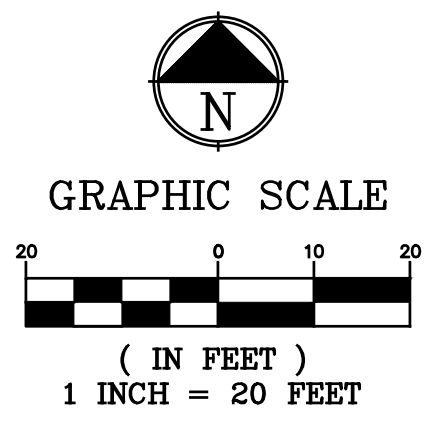
PROJECT TITLE: **ESS INC. SITE IMPROVEMENTS**

SHEET TITLE: **CIVIL DETAILS**

SHEET NO. **C5.01**

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EROSION AND SEDIMENT CONTROL GENERAL NOTES:

- ALL BASE EROSION CONTROL MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
- SENSITIVE RESOURCES, INCLUDING BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, STREET SWEEPING AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUNOFF CONTROL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.
- THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

⊗ EROSION AND SEDIMENT CONTROL KEYNOTES:

- INSTALL AND MAINTAIN TEMPORARY 6' TALL CHAIN LINK TREE PROTECTION FENCE PER CITY OF WILSONVILLE DRAWING NUMBER RD-1230, SHEET ESC9.10. LOCATION OF FENCE SHALL BE INSTALLED AT THE TREE DRIP LINE. VERIFY TREE DRIP LINE IN THE FIELD PRIOR TO INSTALLING TREE PROTECTION FENCE. NO CONSTRUCTION ACTIVITIES OR MATERIAL STORAGE SHALL OCCUR WITHIN THE TREE PROTECTION ZONE.
- INSTALL STORMWATER INLET PROTECTION PER CLACKAMAS COUNTY DETAIL DRAWING 4-18/ESC9.10.
- INSTALL CONCRETE WASHOUT PER DETAIL 1/ESC9.10.
- PROTECT STORMWATER SWALE FACILITY AREA. DO NOT COMPACT SOILS WITHIN STORMWATER FACILITY AREAS. STORMWATER AREAS SHALL PRESERVE EXISTING SOIL DENSITY BY LIMITING HEAVY MACHINERY AND VEHICLE TRACKING, AND STORAGE SHALL NOT OCCUR WITHIN THESE AREAS.

EROSION AND SEDIMENT CONTROL LEGEND

FINISHED GRADE CONTOUR (1 FT INTERVAL)	— 102 —
EXISTING GRADE CONTOUR (1 FT INTERVAL)	- - - 102 - - -
SEDIMENT FENCE	— ○ —
ORANGE CONSTRUCTION FENCE	— ○ —
CONSTRUCTION ENTRANCE	▒
INFILTRATION FACILITY PROTECTION AREA (DO NOT COMPACT NATIVE SOILS AT FACILITY SUBGRADE ELEVATION)	▒
INLET PROTECTION	■
SEEDING & MULCHING	▒
CONCRETE WASH AREA	▒
EROSION CONTROL MATTING	▒
DEVELOPED CONDITIONS DRAINAGE FLOW DIRECTION	➔

PREPARED BY:

921 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.DCCIENGINEERS.COM
 CIVIL STRUCTURAL

SIGNATURE:

ROBERT JAMES STEFF
 JULY 15, 2003
 EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041
Proj. Manager: RJJ
Designed: KLE
Reviewed: RJJ
Drawn: KLE
Dwg. Checked: RJJ
Scale: AS SHOWN

PROJECT TITLE:

ESS INC. SITE IMPROVEMENTS

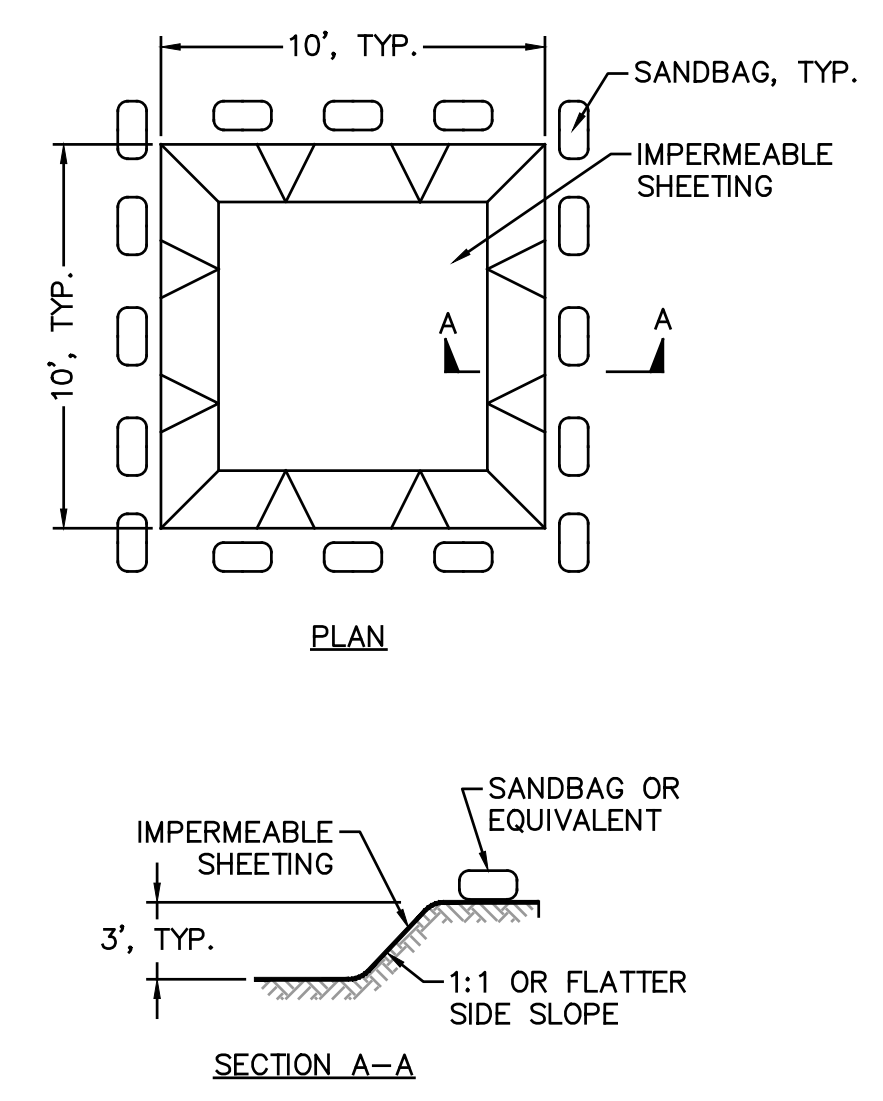
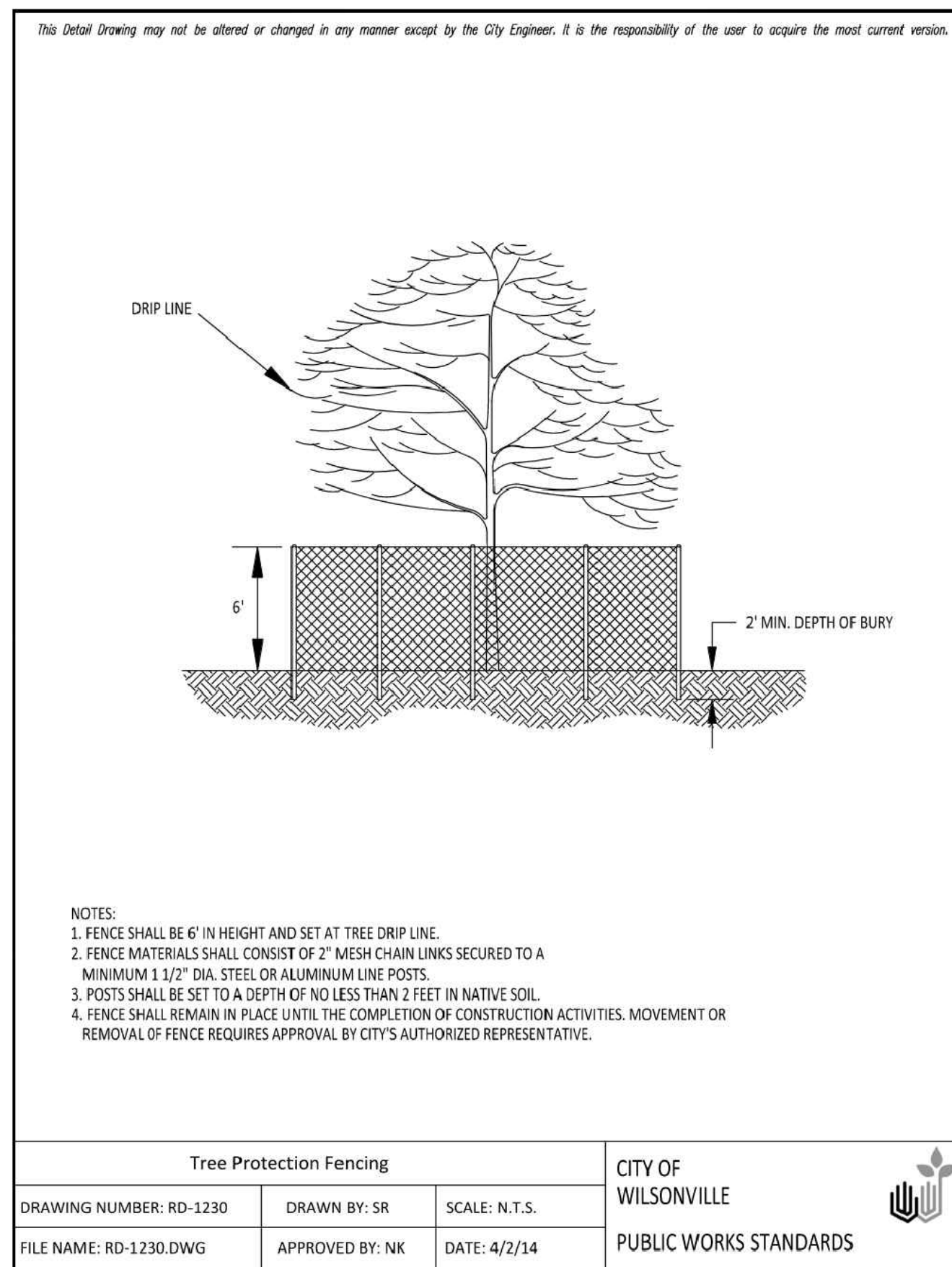
SHEET TITLE:

EROSION AND SEDIMENT CONTROL PLAN - EAST

SHEET NO.

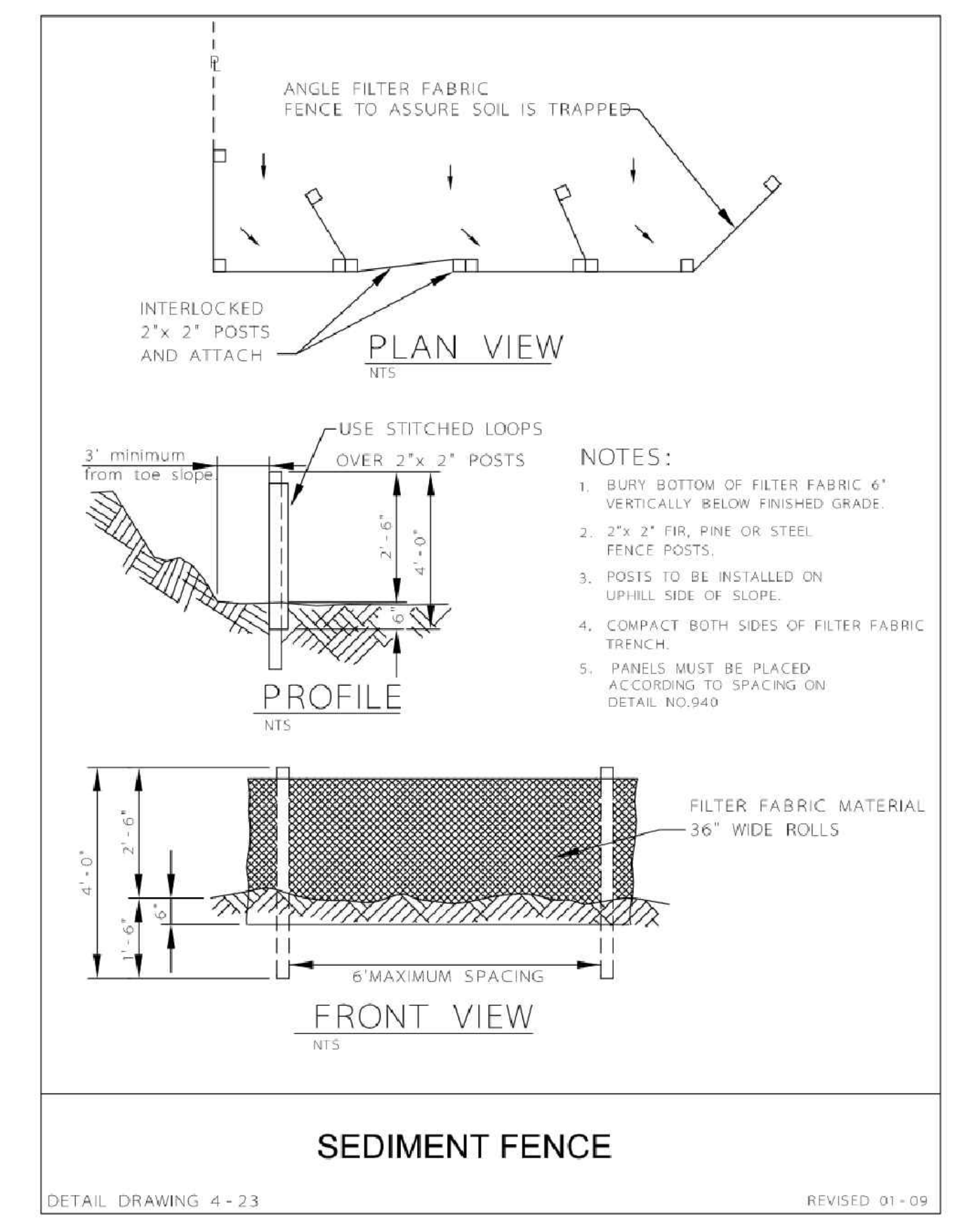
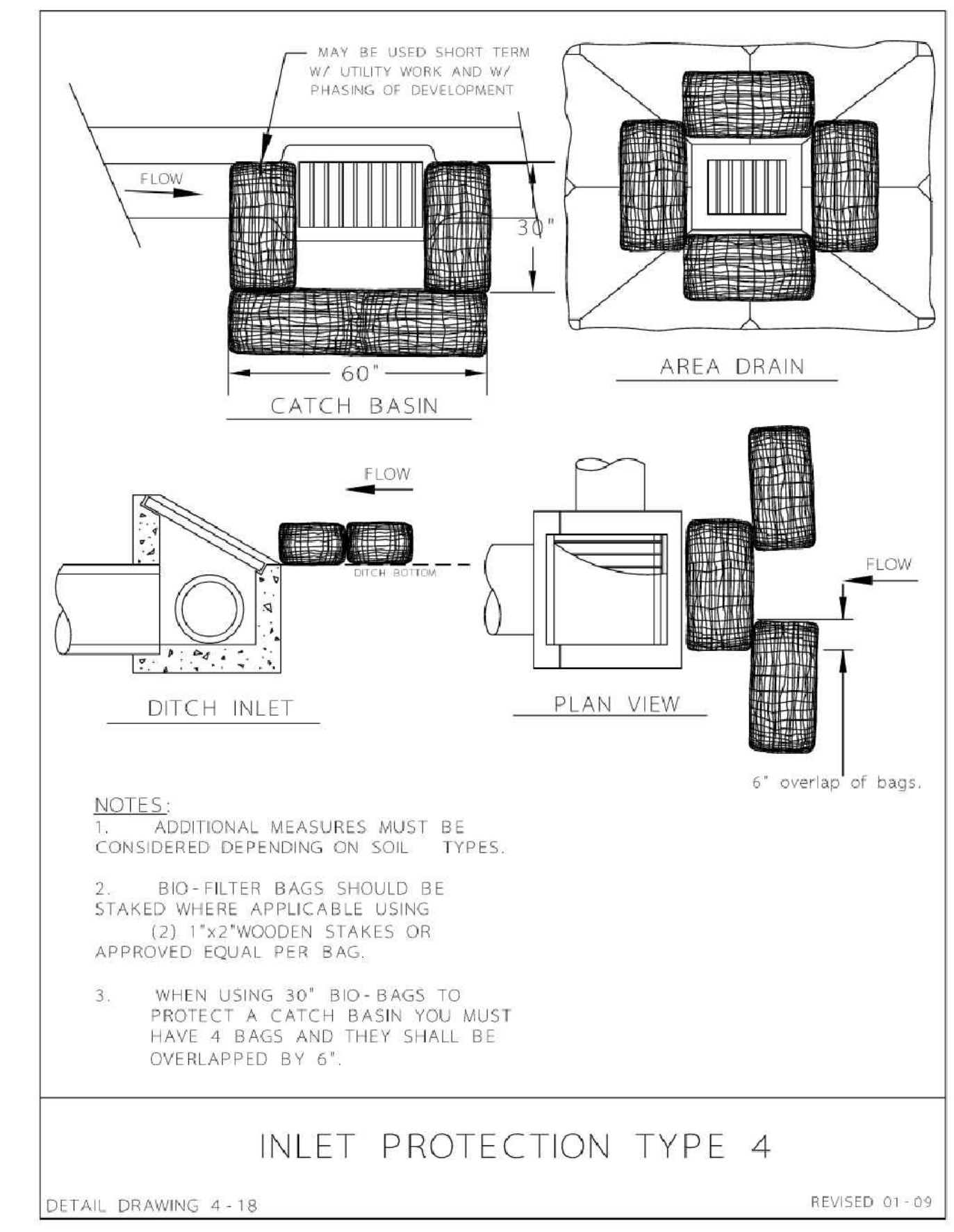
ESC9.01

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 File Location: O:\0320-PortlandDCI-Civil\2021\121032-0041 ESS Inc\DRAWINGS\SHEETS\1032-0041_EROS-CTR-DETAILS.dwg
 Plot Date: 2022-12-15
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- CONCRETE WASHOUT NOTES:**
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
 - ACTUAL LAYOUT WILL BE DETERMINED IN THE FIELD.
 - REMOVABLE RAIN COVER REQUIRED DURING WET WEATHER SEASON.

CONCRETE WASHOUT DETAIL
SCALE: N.T.S. 1



PREPARED BY:

921 SW WASHINGTON ST. • SUITE 560
 PORTLAND, OREGON 97205
 PHONE: (503) 242-2448 • FAX: (503) 242-2449
 WEBSITE: WWW.IDCIENGINEERS.COM
 CIVIL / STRUCTURAL
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SIGNATURE:

REGISTERED PROFESSIONAL
 ENGINEER
 JULY 15, 2003
 OREGON
 ROBERT JAMES STEFF
 EXPIRES: 12/31/2022

REVISIONS:

APPROVALS:

Job No.: 21032-0041	
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Dwg. Checked: RJL	
Scale: AS SHOWN	

PROJECT TITLE:
ESS INC. SITE IMPROVEMENTS

SHEET TITLE:
EROSION AND
SEDIMENT CONTROL
DETAILS

SHEET NO.
ESC9.10

DEVELOPMENT REVIEW BOARD MEETING
JANUARY 9, 2023
6:30 PM

Board Member Communications:

3. Recent City Council Action Minutes

City Council Meeting Action Minutes
November 7, 2022

City Council members present included:

Mayor Fitzgerald
Council President Akervall
Councilor Lehan
Councilor West
Councilor Linville

Amanda Guile-Hinman, City Attorney
Kimberly Veliz, City Recorder
Andrea Villagrana, Human Resource Manager
Zach Weigel, City Engineer
Mark Ottenad, Public/Government Affairs Director
Dan Pauly, Planning Manager
Miranda Bateschell, Planning Director
Chris Neamtzu, Community Development Director
Zoe Mombert, Assistant to the City Manager

Staff present included:

Bryan Cosgrove, City Manager

AGENDA ITEM	ACTIONS
WORK SESSION	
START: 5:00 p.m.	
A. Frog Pond East and South Master Plan	Council provided staff additional feedback and input on the draft Frog Pond East and South Master Plan.
B. City of Wilsonville Flag Policy and Update to Wilsonville Code Section 6.150	The City Attorney reviewed the draft City Flag Policy and draft revision to Wilsonville Code (WC) Section 6.150 with Council and sought their feedback.
REGULAR MEETING	
<u>Mayor's Business</u>	
A. Approval of City Application to Metro for the Acquisition of the Frog Pond West Park Property Utilizing Local Share Funds	This item was voted on during the Communications portion of the agenda.
B. League of Oregon Cities (LOC) Opioid Settlement Board	Council moved to endorse and support Councilor Linville's nomination to serve on the state's Opioid Settlement Board. Passed 4-0-1.
C. Upcoming Meetings	Upcoming meetings were announced by the Mayor as well as the regional meetings she attended on behalf of the City.
<u>Communications</u>	
A. Frog Pond West Neighborhood Park Community Engagement	Council moved to approve the City's application to Metro for the acquisition of the Frog Pond West Neighborhood Park Property utilizing Local Share Funds. Passed 5-0.

<p><u>Consent Agenda</u></p> <p>A. Resolution No. 3010 A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Professional Services Agreement Contract Amendment With AKS Engineering & Forestry, LLC For Design And Construction Engineering Services For The 2022 Curb Ramps Upgrade Project (Capital Improvement Project # 4014, 4118, And 4717).</p> <p>B. Minutes of the October 17, 2022 City Council Meeting.</p>	<p>The Consent Agenda was approved 5-0.</p>
<p><u>New Business</u></p> <p>A. Resolution No. 3004 A Resolution Of The City Of Wilsonville Adopting The Findings And Recommendations Of The “Solid Waste Collection Rate Report, October 2022” And Maintaining The Current Republic Services Rate Schedule, Effective January 1, 2022.</p>	<p>Resolution No. 3004 was adopted 5-0.</p>
<p><u>Continuing Business</u></p> <p>A. None.</p>	
<p><u>Public Hearing</u></p> <p>A. None.</p>	
<p><u>City Manager’s Business</u></p>	<p>The City Manager announced he would check on the status of the archeologist report on Boones Ferry Landing and forward to Council once available.</p>
<p><u>Legal Business</u></p>	<p>No report.</p>
<p>ADJOURN</p>	<p>8:19 p.m.</p>

City Council Meeting Action Minutes
November 21, 2022

City Council members present included:

Mayor Fitzgerald
Council President Akervall - Excused
Councilor Lehan
Councilor West - Excused
Councilor Linville

Beth Wolf, Senior Systems Analyst
Becky White, Permit Technician
Dwight Brashear, Transit Director
Scott Simonton, Fleet Services Manager
Chris Neamtzu, Community Development Director
Katherine Smith, Assistant Finance Director
Dan Carlson, Building Official
Kris Ammerman, Parks and Recreation Director
Dustin Schull, Parks Supervisor
Tommy Reeder, Parks Maintenance Specialist
Zack Morse, Parks Maintenance Specialist
Roger Moeller, Parks Maintenance Specialist
Brian Stevenson, Program Manager
Zach Weigel, City Engineer

Staff present included:

Bryan Cosgrove, City Manager
Andrea Villagrana, Human Resource Manager
Amanda Guile-Hinman, City Attorney
Kimberly Veliz, City Recorder
Jeanna Troha, Assistant City Manager
Delora Kerber, Public Works Director
Kimberly Rybold, Senior Planner
Matt Lorenzen, Economic Development Manager
Bill Evans, Communications & Marketing Manager

AGENDA ITEM	ACTIONS
WORK SESSION	START: 5:01 p.m.
A. Local Public Contracting Code Update	The City Attorney discussed future updates to the City’s Public Contracting Code that are to be examined and recommended by an inter-departmental project team.
B. City Facilities Master Plan Update	Council heard a presentation on the findings of the 2022 City Facility Master Plan.
REGULAR MEETING	
<u>Mayor’s Business</u>	
A. Letter to the Clackamas County Board of County Commissioners	Council made a motion to approve and send the City’s letter of comment on protecting the French Prairie Rural Reserve. It was approved 3-0.
B. Upcoming Meetings	Upcoming meetings were announced by the Mayor as well as the regional meetings she attended on behalf of the City.

Communications

A. Clackamas County Opioid Settlement Presentation

Clackamas County staff shared information on Oregon’s opioid crisis and outlined terms and conditions of financial awards to be received from pharmaceutical companies by local governments to support treatment and prevention of opioid addiction.

B. Oregon Building Officials Association 2022 Permit Technician of the Year Award

Becky White, Permit Technician was recognized as the Oregon Building Officials Association (OBOA) 2022 Permit Technician of the Year.

C. SMART Award Presentation

NW Natural Gas representatives recognized Scott Simonton, Fleet Services Manager and SMART with the Achievement Award-Natural Gas Transit Fleet Program from Natural Gas Vehicles for America (NGVAmerica), which recognizes outstanding contributions to the advancement of natural gas for transportation fuel.

D. Nature Play Area Awards

Parks & Recreation staff was recognized as recipients of the Oregon Recreation & Park Association (ORPA) 2022 “Design & Construction Award” in the small project category for the design and construction of the new Nature Playground at Memorial Park.

Consent Agenda

A. **Resolution No. 2993**

A Resolution Of The City Of Wilsonville Authorizing The City Manager To Enter Into An Intergovernmental Agreement Between Clackamas County, Washington County, And The City Of Wilsonville Related To The Stafford Road At 65th Avenue Temporary Traffic Signal And Traffic Control Changes At 65th Avenue At Elligsen Road Project.

The Consent Agenda was approved 3-0.

B. **Resolution No. 3005**

A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Professional Services Agreement With DOWL To Provide Engineering Consulting Services For The Willamette Water Supply PLM 1.3: Construction Inspection Of City Infrastructure Project (Capital Improvement Project No. 1127).

C. **Resolution No. 3007**

A Resolution Of The City Of Wilsonville Authorizing The Arts, Culture, And Heritage Commission To Administer And Recommend Funding Of The Community Cultural Events And Programs Grant.

D. **Resolution No. 3011**

A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Professional Services Agreement Contract Amendment With Carollo Engineers For The Wastewater Treatment Plant Master Plan Project (Capital Improvement Project #2104).

E. Minutes of the November 7, 2022 City Council Meeting.

New Business

A. **Resolution No. 3001**

A Resolution Of The City Of Wilsonville Approving The Findings Of The 2022 City Facility Master Plan.

Resolution No. 3001 was adopted 3-0.

B. **Resolution No. 3012**

A Resolution Of The Wilsonville City Council Adopting The 2022 Urban Renewal Strategic Plan As Recommended By The Urban Renewal Task Force.

Resolution No. 3012 was adopted 3-0.

C. **Resolution No. 3013**

A Resolution Of The City Of Wilsonville Adopting The Town Center Infrastructure Funding Plan.

Resolution No. 3013 was adopted 3-0.

Continuing Business

A. None.

Public Hearing

A. None.

City Manager's Business

The City Manager shared that the Shred Day event brought in about \$2,200 in donations for Wilsonville Community Sharing.

Legal Business

No report.

URBAN RENEWAL AGENCY	
<u>URA Consent Agenda</u> A. URA Resolution No. 333 A Resolution Of The City Of Wilsonville Urban Renewal Agency Authorizing The City Manager To Enter Into An Intergovernmental Agreement Between Clackamas County, Washington County, And The City Of Wilsonville Related To The Stafford Road At 65th Avenue Temporary Traffic Signal And Traffic Control Changes At 65th Avenue At Elligsen Road Project. B. Minutes of the October 17, 2022 Urban Renewal Agency Meeting.	The URA Consent Agenda was approved 3-0.
<u>New Business</u> A. URA Resolution No. 332 A Resolution Of The City Of Wilsonville Urban Renewal Agency Adopting The 2022 Urban Renewal Strategic Plan As Recommended By The Urban Renewal Task Force.	URA Resolution No. 332 was adopted 3-0.
<u>URA Public Hearing</u> A. None.	
ADJOURN	9:39 p.m.

City Council Meeting Action Minutes
December 5, 2022

City Council members present included:

Mayor Fitzgerald
Council President Akervall
Councilor Lehan – Work Session Only
Councilor West - Excused
Councilor Linville

Amanda Guile-Hinman, City Attorney
Jeanna Troha, Assistant City Manager
Zoe Mombert, Assistant to the City Manager
Miranda Bateschell, Planning Director
Dan Pauly, Planning Manager
Dustin Schull, Parks Supervisor
Chris Delk, Parks Maintenance Specialist
Dan Carlson, Building Official
Bill Evans, Communications & Marketing Manager

Staff present included:

Bryan Cosgrove, City Manager

AGENDA ITEM	ACTIONS
WORK SESSION	
START: 5:05 p.m.	
A. Cultural Calendar	Council was presented a draft calendar that identifies several dates of cultural significance.
B. Update on City Response to Emerald Ash Borer	Staff discussed efforts to mitigate Emerald Ash Borer (EAB) a destructive insect that threatens the City’s ash trees.
C. Willamette Water Supply Program Wilsonville Area Pipeline Project (PLM_1.3)	Council was informed construction plans for a two-mile segment of underground water pipeline to be installed along portions of Kinsman Road, 95 th Avenue, Boeckman Road, and Ridder Road.
D. Commercial and Mechanical Building Codes	Staff presented on Resolution No. 3015, which adopts the Structural Specialty Code and the Mechanical Specialty Code and repeals all prior resolutions.
REGULAR MEETING	
<u>Mayor’s Business</u>	
A. Wilsonville Wildcats Week Proclamation	The Mayor read a proclamation declaring the week of December 5 – 9, 2022 as Wildcats Week and presented a proclamation to the Wilsonville High School Girls Soccer Team.
B. Boards/Commission Appointments/Reappointments	<u>Budget Committee – Reappointment</u> Reappointment of Synthea Russell to the Budget Committee for a term beginning 1/1/2023 to 12/31/2025. Passed 3-0.

Development Review Board A

Reappointment of Rachelle Barrett and Jean Svadlenka to the Development Review Board A for a term beginning 1/1/2023 to 12/31/2024. Passed 3-0.

Development Review Board

Appointment of Jordan Herron, Yara Alatawy, John Hildum and Rob Candrian to the Development Review Board for a term beginning 1/1/2023 to 12/31/2024. Passed 3-0.

Kitakata Sister City Advisory Board

Reappointment of Seiji Shiratori and Ashleigh Sumerlin to the Kitakata Sister City Advisory Board for a term beginning 1/1/2023 to 12/31/2025. Passed 3-0.

Kitakata Sister City Advisory Board

Appointment of Yuki Puram to the Kitakata Sister City Advisory Board for a term beginning 1/1/2023 to 12/31/2024. Passed 3-0.

Kitakata Sister City Advisory Board

Appointment of John Bohlen to the Kitakata Sister City Advisory Board for a term beginning 1/1/2023 to 12/31/2023. Passed 3-0.

Parks & Recreation Advisory Board

Appointment of Keith Gary to the Parks & Recreation Advisory Board for a term beginning 1/1/2023 to 12/31/2026. Passed 3-0.

Planning Commission

Appointment of Nicole Hendrix to the Planning Commission for a term beginning 1/1/2023 to 12/31/2026. Passed 3-0.

Wilsonville-Metro Community Enhancement Committee

Appointment of Maripat Hensel to the Wilsonville-Metro Community Enhancement Committee for a term beginning 1/1/2023 to 6/30/2024. Passed 3-0.

<p>C. Upcoming Meetings</p>	<p>Upcoming meetings were announced by the Mayor as well as the regional meetings she attended on behalf of the City.</p>
<p><u>Communications</u> A. None.</p>	
<p><u>Consent Agenda</u> A. Minutes of the November 21, 2022 Council Meeting.</p>	<p>The Consent Agenda was approved 3-0.</p>
<p><u>New Business</u> A. <u>Resolution No. 3015</u> A Resolution Of The City Of Wilsonville Adopting The Structural Specialty Code And The Mechanical Specialty Code And Repealing All Prior Resolutions That Previously Adopted A Structural Specialty Code Or Mechanical Specialty Code.</p>	<p>Resolution No. 3015 was adopted 3-0.</p>
<p><u>Continuing Business</u> A. None.</p>	
<p><u>Public Hearing</u> A. <u>Ordinance No. 871</u> An Ordinance Of The City Of Wilsonville Amending The Comprehensive Plan Text And Areas Of Special Concern Map To Adopt Airport Good-Nighbor Policies And Designate The Aurora State Airport And Surrounding Properties As An Area Of Special Concern. B. <u>Ordinance No. 870</u> An Ordinance Of The City Of Wilsonville Adopting The Frog Pond East And South Master Plan And Related Comprehensive Plan Text And Map Amendments.</p>	<p>After a public hearing was conducted, Ordinance No. 871 was approved on first reading by a vote of 3-0. After a public hearing was conducted, Ordinance No. 870 was approved on first reading by a vote of 3-0.</p>
<p><u>City Manager’s Business</u></p>	<p>The City Manager reiterated the Tree Lighting event was amazing.</p>
<p><u>Legal Business</u></p>	<p>No report.</p>
<p>ADJOURN</p>	<p>8:21 p.m.</p>

City Council Meeting Action Minutes
December 19, 2022

City Council members present included:

Mayor Fitzgerald
Council President Akervall
Councilor Lehan
Councilor West
Councilor Linville

Dwight Brashear, Transit Director
Eric Loomis, Transit Operations Manager
Zach Weigel, City Engineer
Ryan Adams, Assistant City Attorney
Jeanna Troha, Assistant City Manager
Chris Neamtzu, Community Development Director
Matt Lorenzen, Economic Development Manager
Dan Carlson, Building Official
Miranda Bateschell, Planning Director
Dan Pauly, Planning Manager
Keith Katko, Finance Director
Katherine Smith, Assistant Finance Director
Bill Evans, Communications & Marketing Manager

Staff present included:

Bryan Cosgrove, City Manager
Amanda Guile-Hinman, City Attorney
Kimberly Veliz, City Recorder
Zoe Mombert, Assistant to the City Manager
Anne MacCracken, Transit Management Analyst

AGENDA ITEM	ACTIONS
WORK SESSION	
START: 5:01 p.m.	
A. Survey Results Childcare/Workforce Wilsonville	Staff shared the results of a recent survey to assess the childcare needs of local families and the impact of the current childcare environment on the local labor force.
B. SMART Annual Rider Survey Results	Staff shared details from SMART’s annual passenger survey, an internal tool used to improve service levels, satisfy reporting requirements, and inform future routes.
C. Canyon Creek / Boeckman Intersection Design Update	Staff shared approximate costs and alternatives under consideration to improve the Canyon Creek Road / Boeckman Road intersection in conjunction with the Boeckman Road Corridor Improvement Project. The Council agreed with staff’s recommendation to proceed with a roundabout at this intersection.
REGULAR MEETING	
<u>Mayor’s Business</u>	
A. Recognition of Outgoing Councilors Ben West and Charlotte Lehan	Councilors Ben West and Charlotte Lehan whom terms end December 31, 2022 were recognized appreciated for their service.
B. Transit Oriented Development Project	Council moved to approve Palindrome as the successful proposer for the Transit Oriented Development Project. Passed 5-0.

C. Boards/Commission Appointments/Reappointments

Development Review Board

Appointment of Megan Chuinard and Justin Brown to the Development Review Board for a term beginning 1/1/2023 to 12/31/2023. Passed 5-0.

Diversity, Equity and Inclusion

Reappointment of Erika Pham and Luis Gonzalez to the Diversity, Equity and Inclusion Committee for a term beginning 1/1/2023 to 12/31/2025. Passed 5-0.

Diversity, Equity and Inclusion

Appointment of Karla Brashear to the Diversity, Equity and Inclusion Committee for a term beginning 1/1/2023 to 12/31/2025. Passed 5-0.

Diversity, Equity and Inclusion – Student

Appointment of George Luo and Aasha Patel to the Diversity, Equity and Inclusion Committee for a term beginning 1/1/2023 to 12/31/2023. Passed 5-0.

Parks and Recreation Advisory Board

Reappointment of Amanda Aird to the Parks & Recreation Advisory Board for a term beginning 1/1/2023 to 12/31/2026.. Passed 5-0.

Planning Commission

Appointment of Kathryn Neil to the Planning Commission for a term beginning 1/1/2023 to 12/31/2023. Passed 5-0.

Upcoming meetings were announced by the Mayor as well as the regional meetings she attended on behalf of the City.

D. Upcoming Meetings

Communications

A. Demo Permit Map/Historic Documentation

Council heard details of a new City archival project to preserve images of Wilsonville buildings before they are demolished.

Consent Agenda

A. **Resolution No. 3009**

A Resolution Of The City Of Wilsonville Adopting The South Metro Area Regional Transit (SMART) Public Transportation Agency Safety Plan.

The Consent Agenda was approved 5-0.

<p>B. <u>Resolution No. 3014</u> A Resolution Adopting The Canvass Of Votes Of The November 8, 2022 General Election.</p> <p>C. <u>Resolution No. 3026</u> A Resolution Of The City Of Wilsonville Authorizing South Metro Area Regional Transit (SMART) To A Renewal Of Goods And Services Contract With Optibus, Inc.</p> <p>D. Minutes of the December 5, 2022 City Council Meeting.</p>	
<p><u>New Business</u> A. None.</p>	
<p><u>Continuing Business</u> A. <u>Ordinance No. 870</u> An Ordinance Of The City Of Wilsonville Adopting The Frog Pond East And South Master Plan And Related Comprehensive Plan Text And Map Amendments.</p> <p>B. <u>Ordinance No. 871</u> An Ordinance Of The City Of Wilsonville Amending The Comprehensive Plan Text And Areas Of Special Concern Map To Adopt Airport Good-Neighbor Policies And Designate The Aurora State Airport And Surrounding Properties As An Area Of Special Concern.</p> <p>B.</p>	<p>Ordinance No. 870 was adopted on second reading by a vote of 5-0.</p> <p>Ordinance No. 871 was adopted on second reading by a vote of 5-0.</p>
<p><u>Public Hearing</u> A. <u>Resolution No. 3016</u> A Resolution Of The City Of Wilsonville Authorizing A Supplemental Budget Adjustment For Fiscal Year 2022-23.</p>	<p>After a public hearing was conducted, Resolution No. 3016 was adopted by a vote of 5-0.</p>
<p><u>City Manager’s Business</u></p>	<p>The City Manager echoed the comments made by others about Councilors Lehan and West.</p>
<p><u>Legal Business</u></p>	<p>Council moved to file an amicus brief on Oregon Court of Appeals cases 179661, 179649 and 179634. Passed 5-0.</p>
<p>ADJOURN</p>	<p>8:50 p.m.</p>