



**ZONING BOARD OF APPEALS MEETING**  
**LOCATION: TOWNSHIP ANNEX, 7527 HIGHLAND ROAD, WHITE LAKE, MICHIGAN 48383**  
**(FORMER WHITE LAKE LIBRARY)**  
**THURSDAY, DECEMBER 09, 2021 – 7:00 PM**

---

*White Lake Township | 7525 Highland Rd | White Lake, MI 48383 | Phone: (248) 698-3300 | www.whitelaketwp.com*

---

## **AGENDA**

**1. CALL TO ORDER**

**2. ROLL CALL**

**3. PLEDGE OF ALLEGIANCE**

**4. APPROVAL OF AGENDA**

**5. APPROVAL OF MINUTES**

A. Regular Meeting Minutes of October 28th, 2021

**6. OLD BUSINESS**

**7. NEW BUSINESS**

A.

Applicant: Nick Trifon/ Signs by Crannie

4145 Market Place

Flint, MI 48507

Location: **6707 Highland Road**

White Lake, MI 48383 identified as 12-20-276-014

Request: The applicant requests to enlarge and alter a nonconforming structure (sign) within the setback from the road right-of-way and exceeding the allowed size, requiring a variance from Article 7.23.A, Nonconforming Structures.

B.

Applicant: Leo Huantes

68 W. Fairmont

Pontiac, MI 48340

Location: **4925 Ormond Road**

White Lake, MI 48383 identified as 12-07-130-059

Request: The applicant requests to enlarge and alter a nonconforming structure (house) to construct a garage and second-story, requiring variances from Article 7.23.A, Nonconforming Structures and Article 3.1.6.E, R1-D Single Family Residential Minimum Lot Area. A variance from Article 7.28.A, Repairs and Maintenance to Nonconforming Structures is required due to both the value of improvements and the increase in cubic content.

C.

Applicant: NCM Ventures LLC – John Rozanski

2704 Wabum Road

White Lake, MI 48386

Location: **8565 Pontiac Lake Road**

White Lake, MI 48386 identified as 12-13-328-003

Request: The applicant requests an extension of the approval period for variances granted on June 24, 2021, requiring a variance from Article 7.39, Approval Periods.



D.

Applicant: 4 Corners Square LLC  
29580 Northwestern Hwy STE 100  
Southfield, MI 48034

Location: **1449 Union Lake Road**

White Lake, MI 48386 identified as 12-36-476-032

Request: The applicant requests to construct a building, requiring variances from Article 3.1.13.D, Neighborhood Mixed Use Build-to-Line coverage and Minimum building height. A variance from Article 5.11.P.i, Off-Street Loading Requirements is required for the dimensions of the off-street loading space. A variance from Article 5.9.J.ii.b is required to exceed the allowed number of wall signs.

**8. OTHER BUSINESS**

A. Zoning Ordinance Discussion

**9. ADJOURNMENT**

**Procedures for accommodations for persons with disabilities:** The Township will follow its normal procedures for individuals with disabilities needing accommodations for effective participation in this meeting. **Please contact the Township Clerk's office at (248) 698-3300 X-113 at least two days in advance of the meeting.** An attempt will be made to make reasonable accommodations.

**WHITE LAKE TOWNSHIP  
ZONING BOARD OF APPEALS  
REGULAR MEETING  
October 28, 2021**

**CALL TO ORDER**

Chairperson Spencer called the meeting to order at 7:01 P.M. She then led the Pledge of Allegiance.

**ROLL CALL**

**Present:**

Debby Dehart, Planning Commission Liaison  
Kathleen Aseltyne  
Michael Powell, Township Board Liaison  
Niklaus Schillack  
Jo Spencer, Chairperson

**Absent:**

Dave Walz, Vice Chairperson

**Others:**

Justin Quagliata, Staff Planner  
Hannah Micallef, Recording Secretary

**APPROVAL OF AGENDA**

**MOVED by Member Aseltyne, SUPPORTED by Member Schillack, to approve the agenda as presented. The motion CARRIED with a voice vote (5 yes votes).**

**APPROVAL OF MINUTES:**

- a. Zoning Board of Appeals Regular Meeting of September 23, 2021

Member Powell stated he would like two changes made. On page 15, the 5<sup>th</sup> paragraph from the bottom was missing "was considered." He also wanted to clarify the last sentence read "Member Powell suggested reducing the size of the two-car garage would reduce the setback from the southern and western property lines."

**MOVED by Member Powell, SUPPORTED by Member Schillack to approve the Zoning Board of Appeals Regular Meeting Minutes of September 23<sup>rd</sup>, 2021 as amended. The motion CARRIED with a voice vote (5 yes votes).**

**NEW BUSINESS:**

- A.           Applicant:     Don F. Banaszak  
                                  351 Hillwood Drive  
                                  White Lake, MI 48383
- Location:     **351 Hillwood Drive**  
                                  White Lake, MI 48383 identified as 12-21-452-039
- Request:     The applicant requests to construct an addition, requiring  
                                  variances from Article 3.1.6.E, R1-D Single Family Residential  
                                  Front-Yard Setback and Side-Yard Setback

Chairperson Spencer noted for the record that 23 owners within 300 feet were notified. 0 letters were received in favor, 0 letters were received in opposition, and 0 letters were returned undeliverable from the U.S. Postal Service.

Staff Planner Quagliata presented his staff report.

Chairperson Spencer asked staff if an accurate calculation of the addition size could be determined based on the applicant's submittal. Staff Planner Quagliata said no, and he used an approximate size based on dimensions labeled on the drawing.

Member Schillack asked staff if the survey had anything else on it that seemed off. Staff Planner Quagliata said he wasn't sure if the dock was there, but the land description was correct.

Member Aseltyne asked staff if the septic was labeled on the survey. Staff Planner Quagliata said no.

Member Dehart asked staff if Hillwood Drive had sewer at the road. Staff Planner Quagliata said no.

Mr. Todd Banaszak, son of the applicant, was present to speak on behalf of the case. He said he was looking to increase the space in the house as he was moving in with his parents. There would be a kitchen, bathroom, living room, and laundry room included with the addition. His parents had lived in the house for 50 years.

Staff Planner Quagliata said the addition could be an accessory dwelling unit, and the size of the addition would have to be reduced in order to grant approval as the size variance was not requested or noticed.

Member Aseltyne asked staff what constituted an accessory dwelling unit. Staff Planner Quagliata said an accessory dwelling unit was similar to a mother-in-law suite or a granny flat.

Member Schillack asked the applicant how the addition would be constructed. Mr. Banaszak said they would be going up with the addition, and the house would keep the same profile.

Member Schillack asked the applicant why they chose to go up with the addition instead of take it to the back of the property. Mr. Banaszak said there was a deck in the back, as well as the septic field.

Member Powell stated if the addition was scaled back from the road and reduced 10.5 feet, a setback variance would not be needed.

Mr. Banaszak said he was only changing the elevation with the addition; the design would remain the same. Member Powell said there was a proposed addition of 10 feet to the elevation on the wall.

Member Schillack said there was room in the back of the lot for an addition. Mr. Banaszak said there was property to the rear of the lot, but there was also a hill.

Don Banaszak, homeowner, was present to speak on the case. He said it would not make sense to go back as there was not a lot of room on the top of the hill. The logical way for him would be to have the addition go up, in addition to HVAC reasons.

Member Dehart asked if the second story could be moved closer to the rear of the house without affecting the existing home. Member Powell said yes.

Chairperson Spencer opened the public hearing at 7:31 P.M.

Joel Morris, 144 Orchardale, Rochester, MI. He said he was a builder in the area and helping the applicants.

Chairperson Spencer closed the public hearing at 7:34 P.M.

Member Schillack said he was struggling to understand the defining line between having two kitchens and an accessory dwelling unit. Staff Planner Quagliata stated there were zoning standards for accessory dwelling units. He added the staff reviewed accessory dwelling units on a case-by-case basis.

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance:

- A. Practical Difficulty
  - Chairperson Spencer said she did not see a practical difficulty.
  - Member Powell agreed since the applicant had the option of redesigning their plans and not needing a variance.
- B. Unique Situation
  - Chairperson Spencer said since a practical difficulty could not be proven, there was not a unique situation.
- C. Not Self-Created
  - Member Schillack said the addition encroaching on the setback was not necessary due to the size of the lot.
- D. Substantial Justice
  - Member Powell said the lot was beautiful, and there were options and opportunities that came with it.
- E. Minimum Variance Necessary
  - Member Schillack said there was room to build on the lot.

**Member Aseltyne MOVED to deny the variances requested by Don F. Banaszak for Parcel Number 12-21-452-039, identified as 351 Hillwood Drive, due to the following reason(s):**

- **Failure to fulfill the standards from Article 7, Section 37 of the ClearZoning Ordinance.**

**Member Schillack SUPPORTED, and the motion CARRIED with a roll call vote: (5 yes votes): (Aseltyne/yes, Schillack/yes, Powell/yes, Dehart/yes, Spencer/yes)**

- B. Applicant: Anthony Dubay  
7785 Haley Road White Lake, MI 48383
- Location: **7785 Haley Road**  
White Lake, MI 48383 identified as 12-16-401-004
- Request: The applicant requests to construct an addition, requiring variances from Article 3.1.1.F, AG Agricultural Side-Yard Setback, Minimum Lot Area, and Minimum Lot Width. A variance from Article 7.28.A, Repairs and Maintenance to Nonconforming Structures is required due to both the value of improvements and the increase in cubic content.

Chairperson Spencer noted for the record that 11 owners within 300 feet were notified. 0 letters were received in favor, 0 letters were received in opposition, and 0 letters were returned undeliverable from the U.S. Postal Service.

Staff Planner Quagliata gave his staff report.

Member Dehart asked staff how the Agricultural zoning remained when the property was divided. Staff Planner Quagliata said the division occurred decades ago and was not completed through the Township.

Member Schillack asked staff where the well and septic were. Staff Planner Quagliata said the locations were not identified on the survey.

Anthony Dubay, 7785 Haley, applicant, was present to speak on his case. He and his wife wanted an addition off the back of their house for more space. He said his well was 6-7 feet off the front porch, and the septic was 60-70 feet from the well towards the road. He would be keeping the same side setback of the house, and the roofline would remain the same.

Chairperson Spencer opened the public hearing at 8:05 P.M.

Christopher Young, 7755 Haley Road, spoke in favor of the applicant's request.

Chairperson Spencer closed the public hearing at 8:06 P.M.

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance:

- A. Practical Difficulty
  - Chairperson Spencer said she saw a practical difficulty in regard to the narrowness of the lot. Member Schillack agreed.
  - Member Aselyne said the lot was a zoning oddity that predated the owner purchasing it.
- B. Unique Situation
  - The ZBA agreed the situation was unique.
- C. Not Self-Created
  - Member Schillack said the applicant did their best to make the addition as conforming as possible.
- D. Substantial Justice
  - Member Schillack said the variances would allow the applicant to expand their house on a lot that was oddly shaped.
- E. Minimum Variance Necessary
  - Member Dehart said the applicant was not asking to create anything wider than the existing structure. Member Schillack agreed.

Member Schillack **MOVED** to approve the variances requested by Anthony Dubay from Article 3.1.1.F and Article 7.28.A of the Zoning Ordinance for Parcel Number 12-16-401-004, identified as 7785 Haley Road, in order to construct an addition that would encroach 5.6 feet into the required east side yard setback and exceed the allowed value of improvements to a nonconforming structure by 228%. A 225-foot variance from the required lot width and 182,550 square foot variance from the required lot size are also granted from Article 3.1.1.F. This approval will have the following conditions:

- The Applicant shall obtain all necessary approvals from the Oakland County Health Division prior to issuance of a building permit.
- The Applicant shall obtain all necessary permits from the White Lake Township Building Department.
- A foundation certificate shall be required prior to the backfill inspection by the Building Department.
- An as-built survey shall be required to verify setbacks.

Member Aselyne **SUPPORTED** and the motion **CARRIED** with a roll call vote: (5 yes votes) (Schillack/yes, Aselyne/yes Spencer/yes, Dehart/yes, Powell/yes).

C. Applicant: Chew Land Management – Jamie & Joe Crawford  
3253 Owen Road Fenton, MI 48430  
Location: **10855 Highland Road**  
White Lake, MI 48386 identified as 12-22-301-007  
Request: The applicant requests to install a monument sign within the setback from the road right-of-way and exceeding the allowed size, requiring variances from Article 5.9.J.i.a and Article 5.9.J.i.b. A variance from the minimum sign base height is required from Article 5.9.J.i.a. A variance from Article 5.9.J.ii.a and Article 5.9.J.ii.b is required to exceed the allowed size and number of wall signs. A variance from Article 5.18.G is required to exceed the allowed footcandle level for proposed canopy luminaries.

Chairperson Spencer noted for the record that 9 owners within 300 feet were notified. 0 letters were received in favor, 0 letters were received in opposition, and 0 letters were returned undeliverable from the U.S. Postal Service.

Staff Planner Quagliata gave his staff report.

Member Powell asked staff how the zoning ordinance interpreted a sign versus an architectural feature. Staff Planner Quagliata said anything used or intended to be used to attract attention or convey information was considered a sign.



Member Powell asked staff why the footcandles were measured from 6 feet above grade. Staff Planner Quagliata said the average person experiences outdoor light from eye level, and a footcandle was measured differently from a lumen. Lumens were different from illuminance.

Member Dehart asked staff if a freestanding building was treated differently than a multi-tenant strip mall in regards to wall signage. Staff Planner Quagliata said each tenant would be permitted one wall sign.

Cheryl Ball, 1630 Hilltop Drive and Joe Crawford, 3253 Own Road, Fenton, were present to speak on their case. Ms. Ball said the monument sign would be installed in the location of the existing sign. The new sign was dictated by corporate standards. The monument sign was in a great location for both sides of the road. In regards to the lighting, a new photometric plan was being prepared. The safety of customers at night was important with having the correct light levels. There would be fully recessed fixtures put into the canopy. The light levels were taken from ground level. The parking lot lighting helped the access road and the ingress and egress on the site. Other townships considered the red band around the building an architectural feature, not a sign. The red canopy on the drive through and the exit doors were provided to shield the weather.

Member Powell stated the building was very recognizable as an Arby's. He asked the applicants if the color of the canopies could be changed so the canopies would not count as signage. Mr. Crawford said he could explore that option with corporate.

Member Aselyne asked the applicant what the practical difficulty was. Ms. Ball said moving the monument sign back encroached on parking surface. Mr. Crawford said people driving down M-59 may not know there was an Arby's there. Ms. Ball said the base of the monument sign would have faux masonry around it.

Chairperson Spencer opened the public hearing at 8:57 P.M. Seeing no public comment, she closed the public hearing at 8:57 P.M.

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance for Variances 1, 2, and 3:

A. Practical Difficulty

In regards to Variance 1:

- Member Schillack said he saw a practical difficulty in regards to topography.
- Member Powell said he saw a practical difficulty in regards to traffic and would be an issue in regards to safety. Chairperson Spencer agreed.

In regards to Variances 2&3:

- Member Powell said the size of the sign was the proper size to be seen down M-59 while driving.

B. Unique Situation

In regards to Variances 2&3:

- Member Dehart said the sign could not be moved back. Member Powell and Member Schillack agreed.

C. Not Self-Created

D. Substantial Justice

In regards to Variance 1:

- Member Schillack said the ZBA would be granting rights similar to what other businesses had.

In regards to Variances 2&3:

- Member Schillack said other nearby businesses had noticeable signage.

E. Minimum Variance Necessary

In regards to Variance 1:

- Member Powell said the sign would be set far enough off the road not to create a sight distance issue.

In regards to Variances 2&3:

- Member Powell said this applied in regard to Variance 3. In regard to Variance 2, he said the ZBA would be granting a variance less than the ordinance requirements. Member Powell said the 1-inch variance was the minimum necessary to obtain the 7-foot maximum height.

**Member Powell MOVED to approve the variances requested by Chew Land Management from Article 5.9.J.i.a, Article 5.9.J.i.b, of the Zoning Ordinance for parcel number 12-22-301-007, identified as 10855 Highland Road, in order to install a 49.14 square foot monument sign that would be located 12'-4" from the road right-of-way line and to allow for a sign base height of 23 inches, resulting in a variance of 1 inch, and a variance of 24.48 square feet resulting in a 49.14 square foot sign size. This approval will have the following conditions:**

- **The Applicant shall obtain all necessary permits from the White Lake Township Building Department.**
- **No additional freestanding signage shall be permitted on the site.**
- **Any future modification to freestanding signage on the site, except for eliminating signage, shall require approval of the Zoning Board of Appeals.**
- **The foundation of the sign be verified by a registered land surveyor prior to installing the sign cabinet.**

**Member Schillack SUPPORTED, and the motion CARRIED with a roll call vote: (5 yes votes) (Powell/yes Schillack/yes, Dehart/yes, Aseltyne/yes, Spencer/yes)**

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance again for Variances 11, 12, and 13:

- A. Practical Difficulty
  - Member Powell said the ordinance was written for an architectural issue, not a safety issue.
- B. Unique Situation
  - Member Powell said the lighting was going to be only over three key safety locations.
  - Member Schillack said the business brought a high volume of consumers, and fast-food restaurants could attract nefarious activity at night.
- C. Not Self-Created
  - Member Powell said the problem was safety created.
- D. Substantial Justice
  - Member Schillack said similar businesses in the area had outdoor lighting.
  - Member Powell said the lit canopies would direct customers to entrances at night.
- E. Minimum Variance Necessary
  - Member Dehart said the lit canopies would only be at three locations on the building.

**Member Aselyne MOVED to approve the variances requested by Chew Land Management from Article 5.1.8.G of the Zoning Ordinance for parcel number 12-22-301-007, identified as 10855 Highland Road, in order allow each of the three proposed luminaries to exceed the allowed footcandle limit by 10 footcandles. This approval will have the following conditions:**

- **The Applicant shall obtain all necessary permits from the White Lake Township Building Department.**
- **No additional outdoor lighting shall be permitted on the building or site.**
- **Any future modification to outdoor lighting on the building or site, except for eliminating outdoor lighting, shall require approval of the Zoning Board of Appeals.**
- **Prior to installing the luminaries, a lighting (photometric) plan shall be submitted to verify the footcandles are 15 at 6 feet above grade.**

**Member Schillack SUPPORTED, and the motion CARRIED with a roll call vote: (5 yes votes) (Aselyne/yes, Schillack/yes, Dehart/yes, Spencer/yes, Powell/yes).**

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance again for Variance 6:

- A. Practical Difficulty
  - Member Powell said there was no practical difficulty. Chairperson Spencer and Member Schillack agreed.
- B. Unique Situation
  - Member Aseityne said there was no practical difficulty so there was not a unique situation.
- C. Not Self-Created
  - Member Powell said the issue was self-created.
- D. Substantial Justice
- E. Minimum Variance Necessary

**Member Schillack MOVED to deny the variance requested by Chew Land Management from Article 5.9.j.ii.b, for parcel 12-22-301-007, identified as 10855 Highland Road, for 1 wall sign on the rear (south) facade due to the following reason(s):**

- **Failure to meet the standards from Article 7, Section 37 of the ClearZoning Ordinance.**

**Member Aseityne SUPPORTED, and the motion CARRIED with a roll call vote: (4 yes votes) (Schillack/yes, Aseityne/yes, Spencer/yes, Dehart/no, Powell/yes).**

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance again for Variances 5, 8, and 10:

- A. Practical Difficulty
  - Chairperson Spencer did not see a practical difficulty. Member Powell, Member Aseityne, and Member Schillack agreed.
- B. Unique Situation
  - Member Spencer said there was no practical difficulty, so there was no unique situation.
- C. Not Self-Created
  - Member Dehart said the applicant's problem was self-created.
- D. Substantial Justice
  - Member Powell said there were no other stores on that site that wrapped their building in a corporate designed stripe.
- E. Minimum Variance Necessary
  - Chairperson Spencer said there was no practical difficulty, so this standard was not met.

**Member Schillack MOVED to deny the variances requested by Chew Land Management from Article 5.9.j.ii.b of the Zoning Ordinance for parcel number 12-22-301-007, identified as 10855 Highland Road, for the 73.42 square foot sign stripe on the north facade, 53.6 square foot sign stripe on the east facade, and the 56 square foot sign stripe on the west facade, due to the following reason(s):**

- **Failure to meet the standards from Article 7, Section 37 of the ClearZoning Ordinance.**

**Member Powell SUPPORTED, and the motion CARRIED with a roll call vote: (5 yes votes) (Schillack/yes, Powell/yes, Spencer/yes, Dehart/yes, Aseltyne/yes).**

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance again for Variance 9:

- A. Practical Difficulty
  - Member Dehart said there was a safety issue as the sign was not seen from the west until one drove past it.
  - Chairperson Spencer did not consider the access drive to the west as a road.
- B. Unique Situation
  - Member Powell said the safety for drivers down M-59 was a factor.
- C. Not Self-Created
  - Member Powell said the applicant did not design any of the driveways leading into the site.
- D. Substantial Justice
  - Member Powell said highlighting the main entrance into the building was substantial justice.
- E. Minimum Variance Necessary
  - Member Schillack said by denying the stripe, the minimum variance would be granted.

**Member Schillack MOVED to approve the variance requested by Chew Land Management from Article 5.9.j.ii.b for parcel number 12-22-301-007, identified as 10855 Highland Road, to allow a 26 square foot “Arby’s” sign on the west facade of the building. The approval will have the following conditions:**

- **The Applicant shall obtain all necessary permits from the White Lake Township Building Department.**
- **No additional signage on the west facade of the building shall be permitted.**
- **Any future modification to signage on the west facade of the building, except for eliminating signage, shall require approval of the Zoning Board of Appeals.**

**Member Aseltyne SUPPORTED, and the motion CARRIED with a roll call vote (5 yes votes):  
(Schillack/yes, Aseltyne/yes, Spencer/yes, Dehart/yes, Powell/yes)**

The ZBA discussed the standards from Article 7, Section 37 from the ClearZoning Ordinance again for Variances 4&7:

- A. Practical Difficulty
  - Member Dehart said the practical difficulty was for those traveling westbound down M-59 to be able to see the building.
  - Member Powell said every parking space to the east would see the sign on the east side, but a sign on the north facade would not be visible.
- B. Unique Situation
  - Member Powell said the other buildings in the vicinity had signs on them, and Arby's would be missing one if they did not have one on the east facade.
- C. Not Self-Created
  - Member Dehart said the applicant did not put the building there.
- D. Substantial Justice
  - Member Powell said other stores were identifiable from their parking lots. Staff Planner Quagliata stated Village Lakes was governed by a Planned Business development agreement that allowed one building to contain signage on the rear facade.
- E. Minimum Variance Necessary

**Member Dehart MOVED to approve the variance requested by Chew Land Management from Article 5.9.j.ii.b for parcel number 12-22-301-007, identified as 10855 Highland Road, to allow a 25.77 square foot Arby's hat sign on the east facade of the building. The approval will have the following conditions:**

- **The Applicant shall obtain all necessary permits from the White Lake Township Building Department.**
- **No additional signage on the east facade of the building shall be permitted.**
- **Any future modification to signage on the east facade of the building, except for eliminating signage, shall require approval of the Zoning Board of Appeals.**
- **No wall signage shall be permitted on the north facade of the building.**

**Member Aseltyne SUPPORTED, and the motion CARRIED with a roll call vote (5 yes votes):  
(Dehart/yes, Aseltyne/yes, Schillack/yes, Spencer/yes, Powell/yes)**

**Member Schillack MOVED to deny the variance requested by Chew Land Management from Article 5.9.j.ii.a for the additional wall sign area on the building for parcel number 12-22-301-007, identified as 10855 Highland Road, due to failure to meet the standards from Article 7, Section 37 of the ClearZoning Ordinance.**

**Member Powell SUPPORTED and the motion CARRIED with a roll call vote: (5 yes votes).  
(Schillack/yes, Powell/yes, Dehart/yes, Spencer/yes, Aseltyne/yes)**

**OTHER BUSINESS**

- a) 2022 Meeting Schedule

**Member Schillack MOVED to approve the 2022 Zoning Board of Appeals meeting schedule as presented. Member Aseltyne SUPPORTED and the motion CARRIED with a voice vote (5 yes votes).**

**ADJOURNMENT**

**MOVED by Member Dehart, SUPPORTED by Member Schillack to adjourn the meeting at 11:05 P.M. The motion CARRIED with a voice vote (5 yes votes).**

**NEXT MEETING DATE:** December 9, 2021 Regular Meeting

DRAFT

# WHITE LAKE TOWNSHIP ZONING BOARD OF APPEALS

## REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

**TO:** Zoning Board of Appeals  
**FROM:** Justin Quagliata, Staff Planner  
**DATE:** December 9, 2021

---

**Agenda item:** 7a

**Appeal Date:** December 9, 2021

**Applicant:** Nick Trifon / Signs by Crannie

**Address:** 4145 Market Place  
Flint, MI 48507

**Zoning:** GB General Business

**Location:** 6707 Highland Road  
White Lake, MI 48383



## **Property Description**

The approximately 1.443-acre parcel identified as 6707 Highland Road is located on the north side of Highland Road, east of Nordic Drive, and zoned GB (General Business).

## **Applicant's Proposal**

Nick Trifon / Signs by Crannie, the applicant, on behalf of property owner Billy's Tip N' Inn, is proposing to remove an existing message board to install an electronic message board on an existing post-pylon sign.

## **Planner's Report**

The zoning ordinance prohibits post-pylon signs, and the existing sign is nonconforming in numerous ways, including height, size, and setback. In accordance with Article 5, Section 9.J.i.a, freestanding signs must be setback a minimum of ten (10) feet from the existing right-of-way. For sign size, Article 5, Section 9.J.i.b states the sign area of a freestanding sign is dependent upon the sign's setback from the existing right-of-way and the zoning district within which the sign is proposed. For single-tenant buildings in the GB district, freestanding signs are permitted two (2) square feet for each one (1) foot of setback, up to a maximum of 50 square feet in area (with a 25-foot setback). Maximum sign height from grade allowed is seven (7) feet. Additionally, the zoning ordinance requires freestanding signs to be installed on a decorative masonry base utilizing materials such as brick, decorative (split face) masonry block, stone, or the like. This base must be a minimum of two (2) feet in height from the finished grade. Based on a diagram provided by the applicant, which is not to scale, the existing freestanding sign is approximately 15.5 feet in height and located one to three feet from the right-of-way line (multiple versions of plans were submitted showing different setbacks). The height of the existing sign provided by the applicant is not accurate; the maximum extent of the structure is likely greater than 16 feet from grade. Overall, the current sign exceeds 50 square feet in size (only partial area was provided). An existing nonelectronic message board on the sign extends 8.33 feet above grade and is 14.05 square feet in size. Contrary to the note listed on the submitted diagram indicating the size of the proposed electronic message board as 21 square feet, based on the dimensions of the cabinet the panel is 24.77 square feet in size.

An illegal vehicle sign is located west of the nonconforming post-pylon sign. Article 5, Section 9.F.ix of the zoning ordinance states vehicle signs are prohibited as permanent signs in all zoning districts. The Zoning Board of Appeals may consider ordering this violation be corrected.

Following is a summary of nonconformities and proposed enlargements/alterations to the post-pylon sign:

Nonconformity #	Ordinance Section	Subject	Standard	Request	Result
1	Article 5.9.J.i.a	Freestanding signs	Monument signs	Post-pylon sign	Post-pylon sign
2	Article 5.9.J.i.a	Sign setback	10 feet min.	29 feet (60 square foot sign?)	1 foot?
3	Article 5.9.J.i.a	Minimum sign base height	2 feet min.	2 feet	0 feet
4	Article 5.9.J.i.b	Maximum size of signs	50 square feet max.	58 square feet? (1-foot setback?)	60 square feet?
5	Article 5.9.J.ii.a	Maximum height of signs	7 feet	9 feet?	16 feet?

The requested variance is listed in the following table.

Variance #	Ordinance Section	Subject	Standard	Requested Variance	Result
1	Article 7.23.A	Nonconforming Structures	No enlargement or alteration	Enlarge and alter nonconforming sign	Increased nonconformities

### Zoning Board of Appeals Options:

**Approval:** I move to approve the variance requested by Nick Trifon / Signs by Crannie from Article 7.23.A of the Zoning Ordinance for Parcel Number 12-20-276-014, identified as 6707 Highland Road, in order to enlarge and alter a nonconforming structure (post-pylon sign) by installing a 24.77 square foot electronic message board located 1 foot from the road right-of-way line. This approval will have the following conditions:

- The Applicant shall obtain all necessary permits from the White Lake Township Building Department.
- No additional signage shall be permitted on the building or site.
- Any future modification to signage on the building or site, except for eliminating signage, shall require approval of the Zoning Board of Appeals.
- Prior to the issuance of a sign permit, the illegal vehicle sign shall be removed from the property.

**Denial:** I move to deny the variance requested by Nick Trifon / Signs by Crannie for Parcel Number 12-20-276-014, identified as 6707 Highland Road, due to the following reason(s):

**Table:** I move to table the variance request of Nick Trifon / Signs by Crannie for Parcel Number 12-20-276-014, identified as 6707 Highland Road, to consider comments stated during this public hearing.

**Attachments:**

1. Variance application dated October 8, 2021.
2. Sign diagram dated April 25, 2018 (revision date October 5, 2021).
3. Site plans.

### 7.37 STANDARDS

General variances: The Zoning Board of Appeals may authorize a variance from the strict application of the area or dimensional standard of this Ordinance when the applicant demonstrates all of the following conditions "A - E" or condition F applies.

- A. Practical difficulty: A practical difficulty exists on the subject site (such as exceptional narrowness, shallowness, shape or area; presence of floodplain; exceptional topographic conditions) and strict compliance with the zoning ordinance standards would unreasonably prevent the owner from using of the subject site for a permitted use or would render conformity unnecessarily burdensome. Demonstration of a practical difficulty shall have a bearing on the subject site or use of the subject site, and not to the applicant personally. Economic hardship or optimum profit potential are not considerations for practical difficulty.
- B. Unique situation: The demonstrated practical difficult results from exceptional or extraordinary circumstances or conditions applying to the subject site at the time the Ordinance was adopted or amended which are different than typical properties in the same zoning district or the vicinity.
- C. Not self created: The applicants problem is not self created.
- D. Substantial justice: The variance would provide substantial justice by granting the property rights similar to those enjoyed by the majority of other properties in the vicinity, and other properties in the same zoning district. The decision shall not bestow upon the property special development rights not enjoyed by other properties in the same district, or which might result in substantial adverse impacts on properties in the vicinity (such as the supply of light and air, significant increases in traffic, increased odors, an increase in the danger of fire, or other activities which may endanger the public safety, comfort, morals or welfare).
- E. Minimum variance necessary: The variance shall be the minimum necessary to grant relief created by the practical difficulty.
- F. Compliance with other laws: The variance is the minimum necessary to comply with state or federal laws, including but not necessarily limited to:
- i. The Michigan Right to Farm Act (P.A. 93 of 1981) and the farming activities the Act protects;
  - ii. The Americans with Disabilities Act of 1990 (as amended), and the needs of handicapped individuals the Act protects, including accessory facilities, building additions, building alterations, and site improvements which may not otherwise meet a strict application of the standards of this Ordinance.

Under no circumstances shall the Board of Appeals grant a variance to allow a use not permissible under the terms of this Ordinance in the district involved, or any use expressly or by implication prohibited by the terms of this Ordinance in said district.

Nick@signsbycrammie.com

### CHARTER TOWNSHIP OF WHITE LAKE Zoning Board of Appeals APPLICATION

White Lake Township Planning Department, 7525 Highland Road, White Lake, MI 48383 248-698-3300 x163

APPLICANT'S NAME: Nick Triton / Signs by Crammie PHONE: 810-845-0491

ADDRESS: 4145 Market Place, Flint MI 48507

APPLICANT'S EMAILADDRESS: \_\_\_\_\_

APPLICANT'S INTEREST IN PROPERTY:  OWNER  BUILDER  OTHER: Sign Co.

ADDRESS OF AFFECTED PROPERTY: 6707 Highland Rd PARCEL # 12 - 20-276-014

CURRENT ZONING: GB PARCEL SIZE: \_\_\_\_\_

STATE REQUESTED VARIANCE AND ORDINANCE SECTION: \_\_\_\_\_

VALUE OF IMPROVEMENT: \$ 30,000.00 SEV OF EXISITING STRUCTURE: \$ \_\_\_\_\_

STATE REASONS TO SUPPORT REQUEST: (ADDITIONALS SHEETS MAY BE ATTACHED)

We are requesting a size variance for a digital sign. The sign is needed to allow for putting messages on the marquee such as now hiring, advertising, & general messages including pictures of food. The request is minimal to what is needed to do so.

APPLICATION FEE: \$440.00 (CALCULATED BY THE PLANNING DEPARTMENT)

APPLICANT'S SIGNATURE: [Signature] DATE: 10/8/2021



**Existing Double Face Pylon Sign (Qty. 1)**

- (2) New S/F Full Color LED Digital Displays Mounted To Each Side Of Existing Poles
- 36"H x 84"W Viewing Area

Existing Reader Board = 14.05 SqFt  
 New LED Viewing Area = 21 SqFt



87" Cabinet

41" Cabinet

X

Signature for approval of artwork - Proceed to production as shown

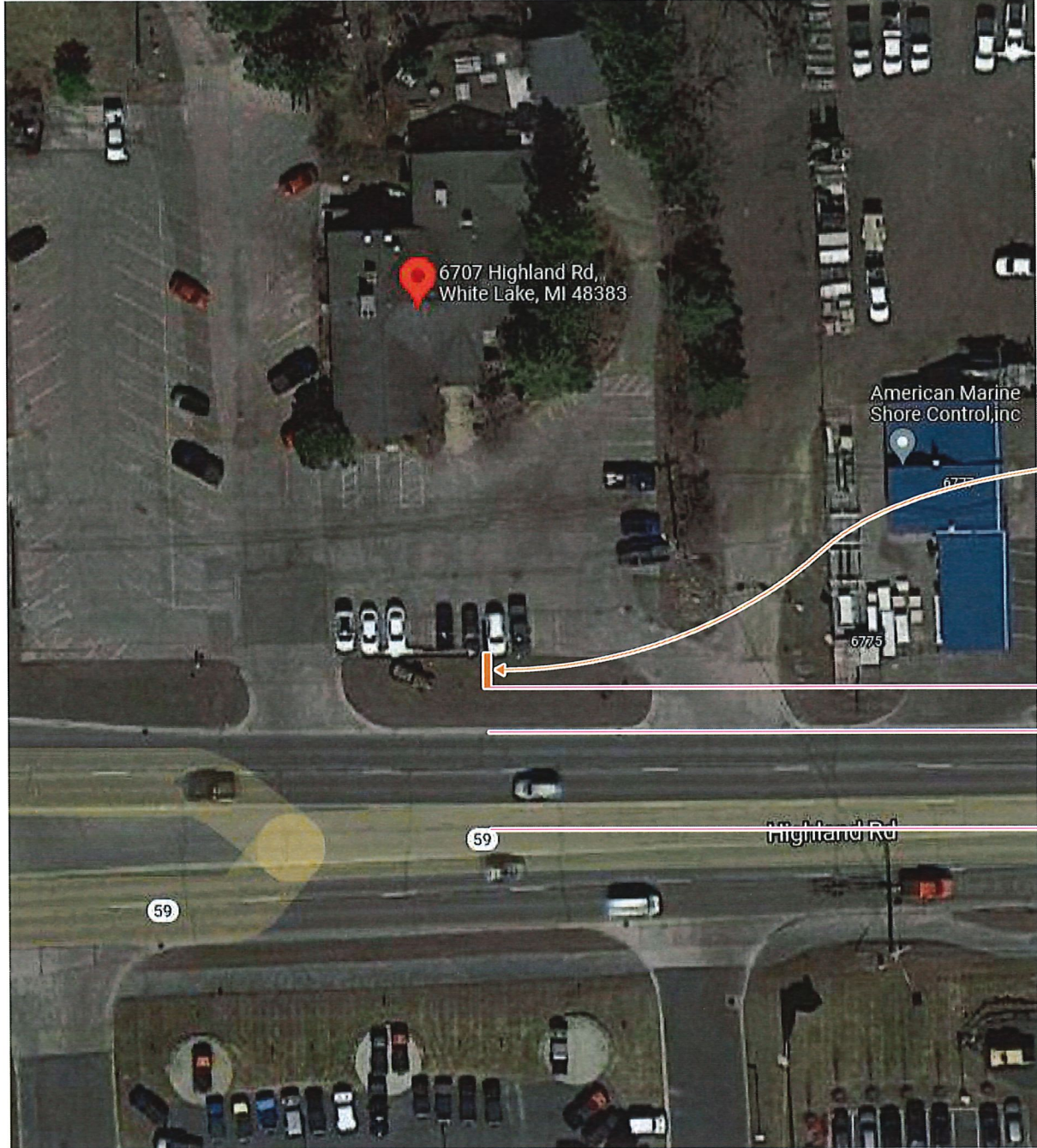


4145 Market Place  
 Flint, Michigan 48507  
 810-487-0000  
 www.SignsByCrannie.com

Customer: Billys Tip N' Inn  
 Address: 6707 E. Highland Road  
 White Lake MI

Salesperson: Nick Trifon  
 Date: 4-25-18  
 D-T: X  
 Scale: 3/8"=1'-0"

Filename: BillysTipInn-Pylon EMC  
 Drawn By: G.Alumbaugh  
 Revision: JN 1-9-19 GA 10-5-21



**Billy's Tip N' Inn**  
 6707 Highland Rd.,  
 White Lake, MI 48383

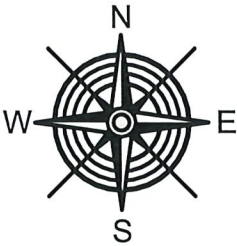
Existing Signage

Edge Of Sign To Road

Edge Of Sign To Center Of Road

19'

51'



RECEIVED

NOV 08 2021

COMMUNITY  
 DEVELOPMENT  
 DEPARTMENT

X

Signature for approval of artwork - Proceed to production as shown

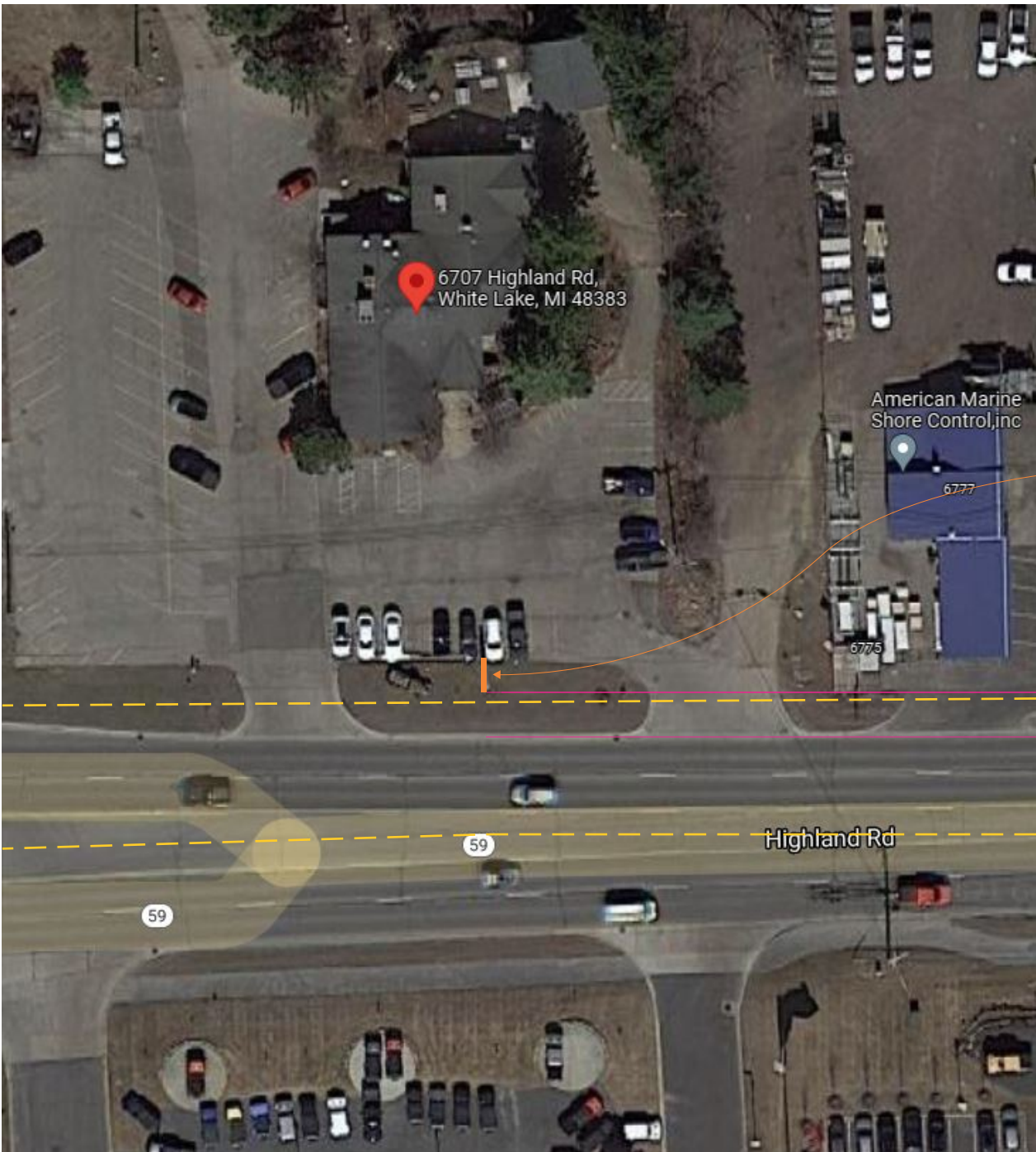


4145 Market Place  
 Flint, Michigan 48507  
 810-487-0000  
 www.SignsByCrannie.com

Customer: Billys Tip N' Inn  
 Address: 6707 E. Highland Road  
 White Lake MI

Salesperson: Nick Trifon  
 Date: 11-5-21  
 D-T: X  
 Scale: NTS=1'-0"

Filename: BillysTipInn-Site Plan  
 Drawn By: James Naegle  
 Revision: X



**Billy's Tip N' Inn**  
 6707 Highland Rd.,  
 White Lake, MI 48383

Existing Signage

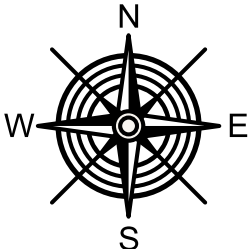
Edge Of Sign To Road

Edge Of Sign To Center Of Road

19'

51'

50'  
ROW



X  
 Signature for approval of artwork - Proceed to production as shown



4145 Market Place  
 Flint, Michigan 48507  
 810-487-0000  
 www.SignsByCrannie.com

**Customer:** Billys Tip N' Inn  
**Address:** 6707 E. Highland Road  
 White Lake MI

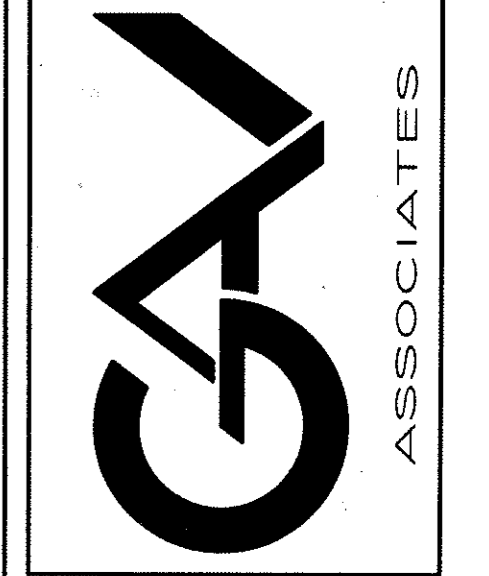
**Salesperson:** Nick Trifon  
**Date:** 11-5-21  
**D-T:** X  
**Scale:** NTS=1'-0"

**Filename:** BillysTipInn-Site Plan  
**Drawn By:** James Naegle  
**Revision:** JN 11-12-21



ISSUED FOR	DATE
PERMITS	4-21-06
S.P.A.	5-14-06
S.P.A.	6-2-06
S.P.A.	6-30-06
FINAL S.P.A.	2-1-07

**ARCHITECTURAL DESIGN**  
**RESIDENTIAL COMMERCIAL INDUSTRIAL**  
 G.A.V. & ASSOCIATES, INC.  
 31471 NORTHWESTERN HWY., SUITE #2  
 FARMINGTON HILLS, MI. 48334  
 (248) 985-9101  
 FAX (248) 985-9105  
 EMAIL: GAV@GAVASSOCIATES.COM

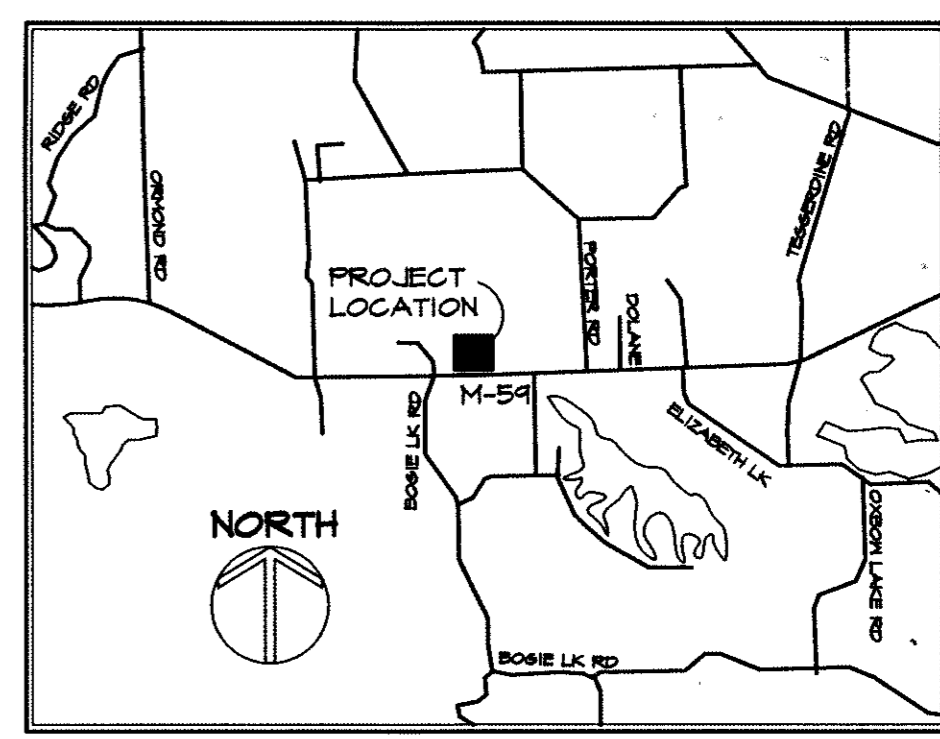


**PROPOSED ADITION FOR:**  
**BILLY'S TIPP-N-INN RESTAURANT**  
**6707 HIGHLAND ROAD**  
**WHITE LAKE, MICHIGAN**

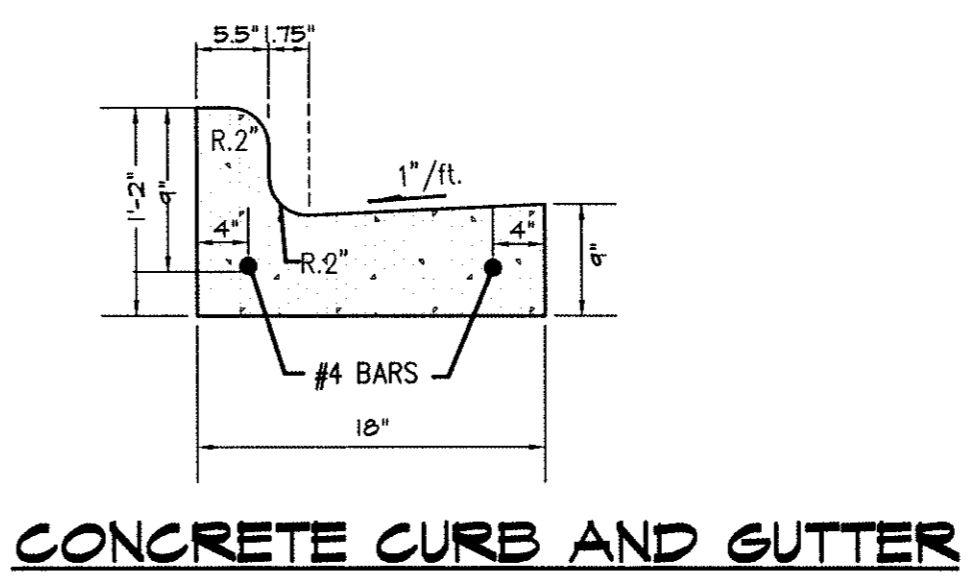
**OWNER / APPLICANT**  
 BILLY WHITE  
 3430 COVERT ROAD  
 WATERFORD, MICHIGAN 48328  
 248-431-7111

DRAWN:	DESIGNED:	CHECKED:
AV	AV	

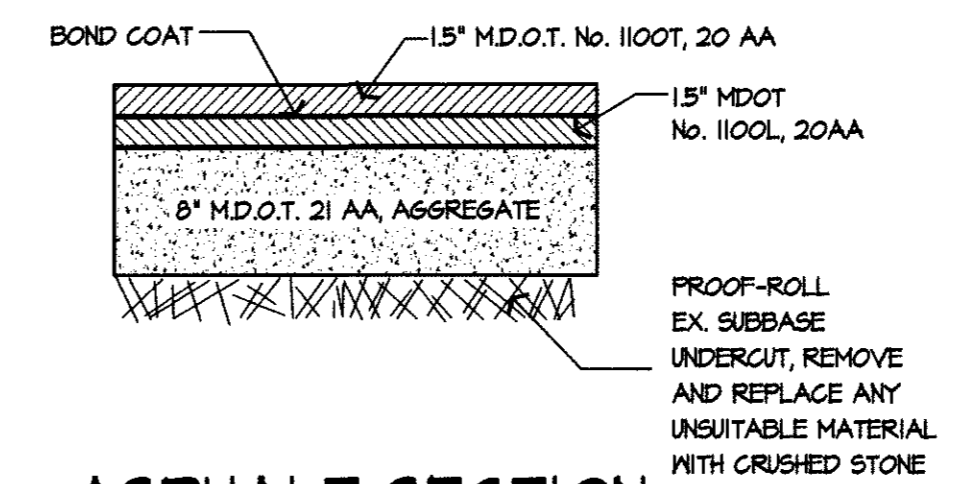
SCALE: 1" = 20'  
 FILE NAME: .  
 JOB #: 05183  
 SHEET TITLE  
 SITE PLAN  
 SHEET #  
**SD-1**



**LOCATION MAP**  
 SCALE: NONE



**CONCRETE CURB AND GUTTER**



**ASPHALT SECTION  
 ALT: 6" CONCRETE**

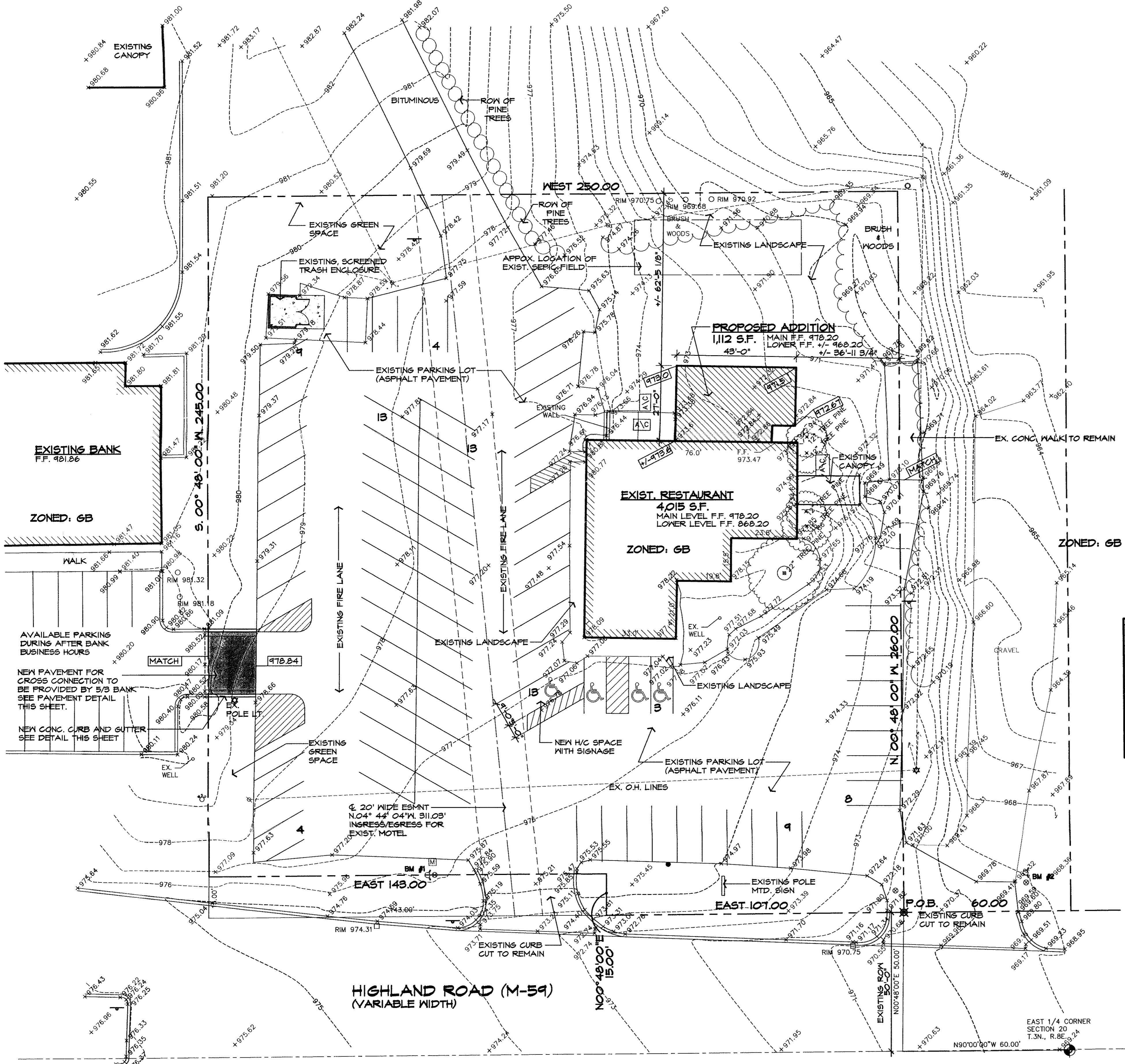
**LEGAL DESCRIPTION**  
 T3N, R2E, SEC 20 PART OF NE 1/4 BEG AT FT DIST W 60 FT & N 00-48-00 E 50 FT FROM E 1/4 COR. TH N 00-48-00 E 260 FT, TH N 250 FT, TH S 00-48-00 W 260 FT, TH E 250 FT TO BEG EXC BEG AT FT DIST W 60 FT & N 00-48-00 E 50 FT & W 107 FT FROM E 1/4 COR. TH N 00-48-00 E 15 FT, X TH E 143 FT, TH S 00-48-00 W 15 FT TO BEG 1.78 A10-24-02 CORR

**SITE & BUILDING DATA**  
 TOTAL SITE AREA: 62,548 SF +/-  
 TOTAL ACREAGE: 1.44 ACRES  
 BUILDING COVERAGE: 5,127 SF  
 PERCENTAGE OF COVERAGE: 8.2%  
 EXISTING FLOOR AREA: 4,015 SF  
 NEW FLOOR AREA: 1,112 SF  
 TOTAL FLOOR AREA: 5,127 SF

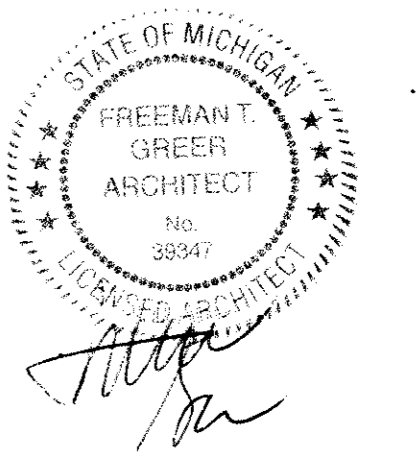
**PARKING REQUIREMENTS**  
**REQ'D PARKING:**  
 ONE SPACE PER 60 GROSS S.F. OF BUILDING AREA, EXCLUDING RESTROOMS, HALLWAYS, STORAGE ROOMS & STAIRWAYS. EQUALS 4,922 S.F. / 60 = 72 SPACES  
**PARKING PROVIDED:**  
 76 SPACES INC. 4 H/C SPACES  
**NOTE: ALL PARKING IS EXISTING**

- GENERAL NOTES**
- ALL LIGHTING & LOCATIONS ARE EXISTING, AND SHALL REMAIN AS IS
  - EXISTING LANDSCAPING TO REMAIN AS IS.
  - NO LARGE EQUIPMENT OR MACHINERY IS TO BE INSTALLED AS PART OF THIS DEVELOPMENT.
  - NO LOUDSPEAKERS OR SOUND SYSTEMS ARE PROPOSED AS PART OF THIS DEVELOPMENT.
  - THERE ARE NO STORAGE TANKS ON THIS SITE.
  - ALL ROAD NAME SIGNS, TRAFFIC CONTROL SIGNS & SIGN POSTS ARE EXISTING AND TO REMAIN AS IS.
  - ALL LOADS/UNLOADING IS DONE PRIOR TO THE BUSINESS OPERATING HOURS. SERVICE IS VIA EXISTING DOOR ON WEST SIDE OF THE BUILDING.
  - ALL UTILITIES ARE EXISTING AND TO REMAIN AS IS EXCEPT FOR THE AGREED FUTURE HOOK UP OF THE SANITARY AND WATER LINE. (PLANS BY OTHERS)
  - STORM WATER DISCHARGED OFF THE ROOF OF THE ADDITION IS TO SPLASH ON GRADE AND IS NOT TO RUNOFF ONTO ADJACENT PROPERTY, PROPER GRADED TO BE MAINTAINED
  - AREA OF EXCAVATION FOR NEW ADDITION TO BE REGRADED AND SEEDED AS REQ'D. PROVIDE SILT FENCE AROUND AREA OF DISTURBANCE

**NOTE:**  
 1. A VARIANCE WAS GRANTED FOR ORDINANCE #22 BY THE AUGUST 15TH 2006 PLANNING COMMISSION FOR UP TO A THREE YEAR DELAY IN INSTALLING THE WATERMAIN CONNECTION.  
 2. THE APPLICANT HAS SUBSEQUENTLY HOOKED UP TO THE SANITARY SEWER SYSTEM DUE TO A FAILURE IN THE EXISTING SEPTIC SYSTEM. REFER TO PLANS PROVIDED BY SPALDING DODECKER FOR THE SANITARY LEAD AND PUMP.



**SITE PLAN**  
 SCALE: 1" = 20'



# WHITE LAKE TOWNSHIP ZONING BOARD OF APPEALS

## REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

**TO:** Zoning Board of Appeals  
**FROM:** Justin Quagliata, Staff Planner  
**DATE:** December 9, 2021

---

**Agenda item:** 7b

**Appeal Date:** December 9, 2021

**Applicant:** Leo Huantes

**Address:** 68 W. Fairmont  
Pontiac, MI 48340

**Zoning:** R1-D Single Family Residential

**Location:** 4925 Ormond Road  
White Lake, MI 48383

## **Property Description**

The approximately 0.211-acre (9,200 square feet) parcel identified as 4925 Ormond Road is located on the west side of Ormond Road, south of Brookfield Drive, and zoned R1-D (Single Family Residential). The existing single-story house on the property (approximately 1,665 square feet in size) utilizes a private well for potable water and a private septic system for sanitation. The property, Lots 148 and 149 of the White Lake Grove No. 1 plat, contains 80 feet in width at the street line.

## **Applicant's Proposal**

Leo Huantes, the applicant, on behalf of property owner Sonny G Investments LLC, is proposing to construct a 24-foot by 25-foot attached garage (600 square feet).

## **Planner's Report**

The existing house was built in 1970 and is nonconforming because it is located 6.9 feet from the north side property line. A minimum 10-foot side yard setback is required in the R1-D zoning district. The parcel is also nonconforming due to a 2,800 square foot deficiency in lot area; in the R1-D zoning district the minimum lot size requirement is 12,000 square feet. The proposed garage addition at the front of the house would be located 6.9 feet from the north side lot line and 15.4 feet from the front property line; therefore, the applicant is requesting to encroach 3.1 feet into the side yard setback and 14.6 feet into the front yard setback (30 feet in the R1-D zoning district). Note the architectural plans show the garage would be 25'-3" wide and the survey shows the garage would be 25 feet wide.

Article 7, Section 28 of the zoning ordinance states repairs and maintenance to nonconforming structures cannot exceed fifty percent (50%) of the State Equalized Valuation (SEV) in any twelve (12) consecutive months. Further, the ordinance does not allow the cubic content of nonconforming structures to be increased. Based on the SEV of the structure (\$62,590), the maximum extent of improvements cannot exceed \$31,295. The value of the proposed work is \$35,000. A variance to exceed the allowed value of improvements by 112% is requested.

The requested variances are listed in the following table.

<b>Variance #</b>	<b>Ordinance Section</b>	<b>Subject</b>	<b>Standard</b>	<b>Requested Variance</b>	<b>Result</b>
1	Article 7.23.A	Nonconforming Structures	No enlargement or alteration	Enlarge and alter nonconforming house	Increased nonconformities
2	Article 3.1.6.E	Minimum lot size	12,000 square feet	2,800 square feet	9,200 square feet
3	Article 7.28.A	Nonconforming structure	50% SEV (\$31,295)	112%	\$3,705 over allowed improvements

**Zoning Board of Appeals Options:**

**Approval:** I move to approve the variances requested by Leo Huantes from Articles 3.1.6.E, 7.23.A, and 7.28.A of the Zoning Ordinance for Parcel Number 12-07-130-059, identified as 4925 Ormond Road, in order to construct a garage addition that would encroach 14.6 feet into the required front yard setback and 3.1 feet into the required side yard setback from the north lot line, and exceed the allowed value of improvements to a nonconforming structure by 112%. A 2,800 square foot variance from the required lot size is also granted from Article 3.1.6.E. This approval will have the following conditions:

- The Applicant shall obtain all necessary permits from the White Lake Township Building Department.
- The survey and/or architectural plans shall be revised to provide consistent garage dimensions.
- A foundation certificate shall be required prior to the backfill inspection by the Building Department.
- An as-built survey shall be required to verify the approved setbacks.

**Denial:** I move to deny the variances requested by Leo Huantes for Parcel Number 12-07-130-059, identified as 4925 Ormond Road, due to the following reason(s):

**Table:** I move to table the variance requests of Leo Huantes for Parcel Number 12-07-130-059, identified as 4925 Ormond Road, to consider comments stated during this public hearing.

**Attachments:**

1. Variance application dated October 19, 2021.
2. Survey prepared by Kennedy Surveying, Inc. dated November 8, 2021.
3. Architectural plans prepared by Sark & Associates dated September 6, 2021.
4. Letter of denial from the Building Department dated October 13, 2021.

### 7.37 STANDARDS

General variances: The Zoning Board of Appeals may authorize a variance from the strict application of the area or dimensional standard of this Ordinance when the applicant demonstrates all of the following conditions "A - E" or condition F applies.

- A. Practical difficulty: A practical difficulty exists on the subject site (such as exceptional narrowness, shallowness, shape or area; presence of floodplain; exceptional topographic conditions) and strict compliance with the zoning ordinance standards would unreasonably prevent the owner from using of the subject site for a permitted use or would render conformity unnecessarily burdensome. Demonstration of a practical difficulty shall have a bearing on the subject site or use of the subject site, and not to the applicant personally. Economic hardship or optimum profit potential are not considerations for practical difficulty.
- B. Unique situation: The demonstrated practical difficult results from exceptional or extraordinary circumstances or conditions applying to the subject site at the time the Ordinance was adopted or amended which are different than typical properties in the same zoning district or the vicinity.

- C. Not self created: The applicants problem is not self created.
- D. Substantial justice: The variance would provide substantial justice by granting the property rights similar to those enjoyed by the majority of other properties in the vicinity, and other properties in the same zoning district. The decision shall not bestow upon the property special development rights not enjoyed by other properties in the same district, or which might result in substantial adverse impacts on properties in the vicinity (such as the supply of light and air, significant increases in traffic, increased odors, an increase in the danger of fire, or other activities which may endanger the public safety, comfort, morals or welfare).
- E. Minimum variance necessary: The variance shall be the minimum necessary to grant relief created by the practical difficulty.
- F. Compliance with other laws: The variance is the minimum necessary to comply with state or federal laws, including but not necessarily limited to:
- i. The Michigan Right to Farm Act (P.A. 93 of 1981) and the farming activities the Act protects;
  - ii. The Americans with Disabilities Act of 1990 (as amended), and the needs of handicapped individuals the Act protects, including accessory facilities, building additions, building alterations, and site improvements which may not otherwise meet a strict application of the standards of this Ordinance.

Under no circumstances shall the Board of Appeals grant a variance to allow a use not permissible under the terms of this Ordinance in the district involved, or any use expressly or by implication prohibited by the terms of this Ordinance in said district.

Cut off date: Nov 4th

December 9th  
Next Mtg

**CHARTER TOWNSHIP OF WHITE LAKE  
Zoning Board of Appeals  
APPLICATION**

White Lake Township Planning Department, 7525 Highland Road, White Lake, MI 48383 248-698-3300 x163

APPLICANT'S NAME: LEO HURTOS PHONE: 248 506-1463

ADDRESS: 68 W Fairmont

APPLICANT'S EMAIL ADDRESS: HURTOS\_HOMES@GMAIL.COM

APPLICANT'S INTEREST IN PROPERTY:  OWNER  BUILDER  OTHER: \_\_\_\_\_

ADDRESS OF AFFECTED PROPERTY: 4925 OLMOND PARCEL # 12 - 07-130-059

CURRENT ZONING: R1-D PARCEL SIZE: \_\_\_\_\_

STATE REQUESTED VARIANCE AND ORDINANCE SECTION: \_\_\_\_\_

VALUE OF IMPROVEMENT: \$ 35,000 SEV OF EXISTING STRUCTURE: \$ \_\_\_\_\_

STATE REASONS TO SUPPORT REQUEST: (ADDITIONAL SHEETS MAY BE ATTACHED)

NEED A 14 FT VARIANCE TO BUILD

A 26' X 24' GARAGE FACING EAST SIDE

APPLICATION FEE: 39500 (CALCULATED BY THE PLANNING DEPARTMENT)

APPLICANT'S SIGNATURE: [Signature] DATE: OCT 19, 2021

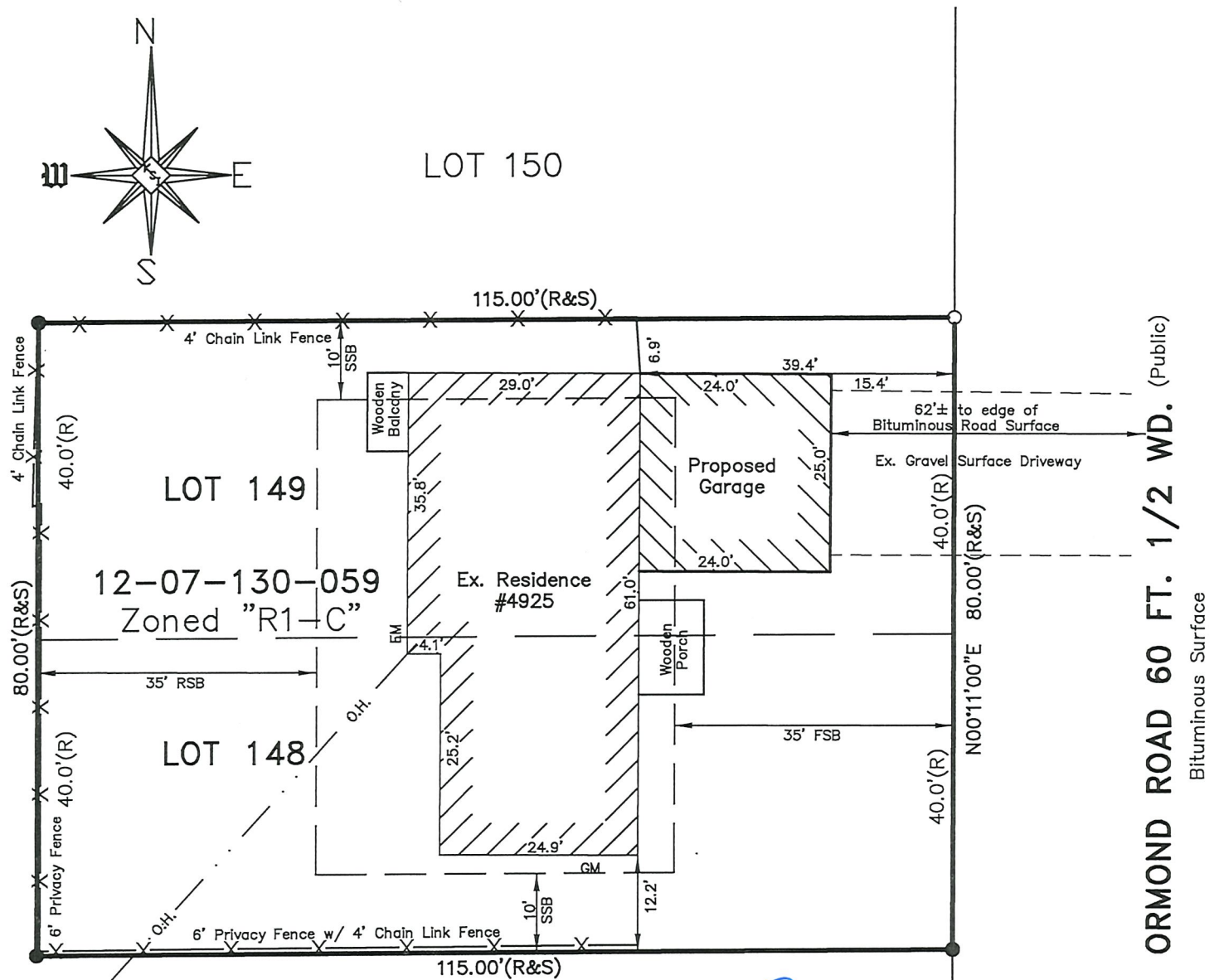
# KENNEDY SURVEYING, INC.

105 N. Washington St.  
Oxford, Michigan 48371  
STAKED SURVEY

Phone (248) 628-4241  
Fax (248) 628-7191

Certified Exclusively To: Huantes Home & Remodeling, Leo Huantes Date: November 08, 2021  
Address: 68 Fairmont, Pontiac, Michigan 48340 Job No. 21-8750

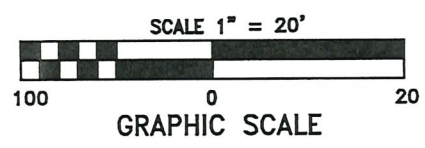
This is to certify that I, H. K. Kennedy, Licensed Professional Surveyor, on this date have surveyed and mapped the land described as follows: Lots 148 & 149 of "WHITE LAKE GROVE SUBN NO.1", being a subdivision of part of the Northwest 1/4 of Section 07, and part of the South 1/2 of Section 06, Town 03 North, Range 08 East, White Lake Township, Oakland County, Michigan. As recorded in Liber 47 of Plats, on Page 44 of Oakland County Records.



FSB = Front Set Back  
RSB = Rear Set Back  
SSB = Side Set Back

P.O.L. = Point On Line

LEGEND	
○	Found 1/2" Iron Rod Unless Otherwise Noted
●	Set 1/2" Iron Rod w/Cap
⊙	Found Concrete Monument
M	Measured Distance
R	Recorded Distance
S	Set Distance
P.O.B.	Point of Beginning
-x-x-	Ex. Fence Line
DWG No.	21-87501
Drawn By:	SST



This survey was done without the benefit of a Title Policy, therefore, all easements of record and other factors relevant to title may not be shown.

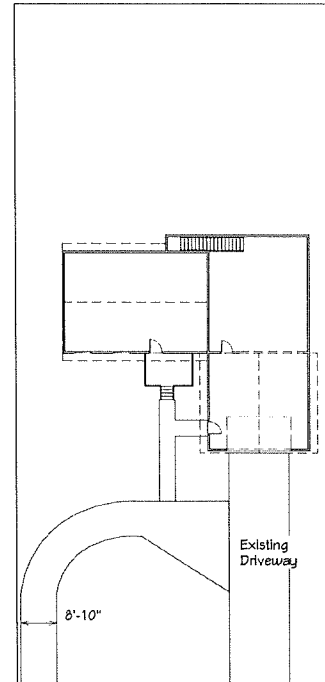
When Recorded Please Return Original(s) To:  
Kennedy Surveying  
105 N. Washington  
Oxford, Michigan

New Items:

- New Garage
- New Circular Drive
- New front walkway
- New decking on existing structure

# Sheet Index

Sheet	Title
A0.1	General Notes
A1.1	Foundation Plan
A1.2	First Floor Plan
A1.3	Roof Plan
A2.1	Elevations
A2.2	Sections



ORMOND RD



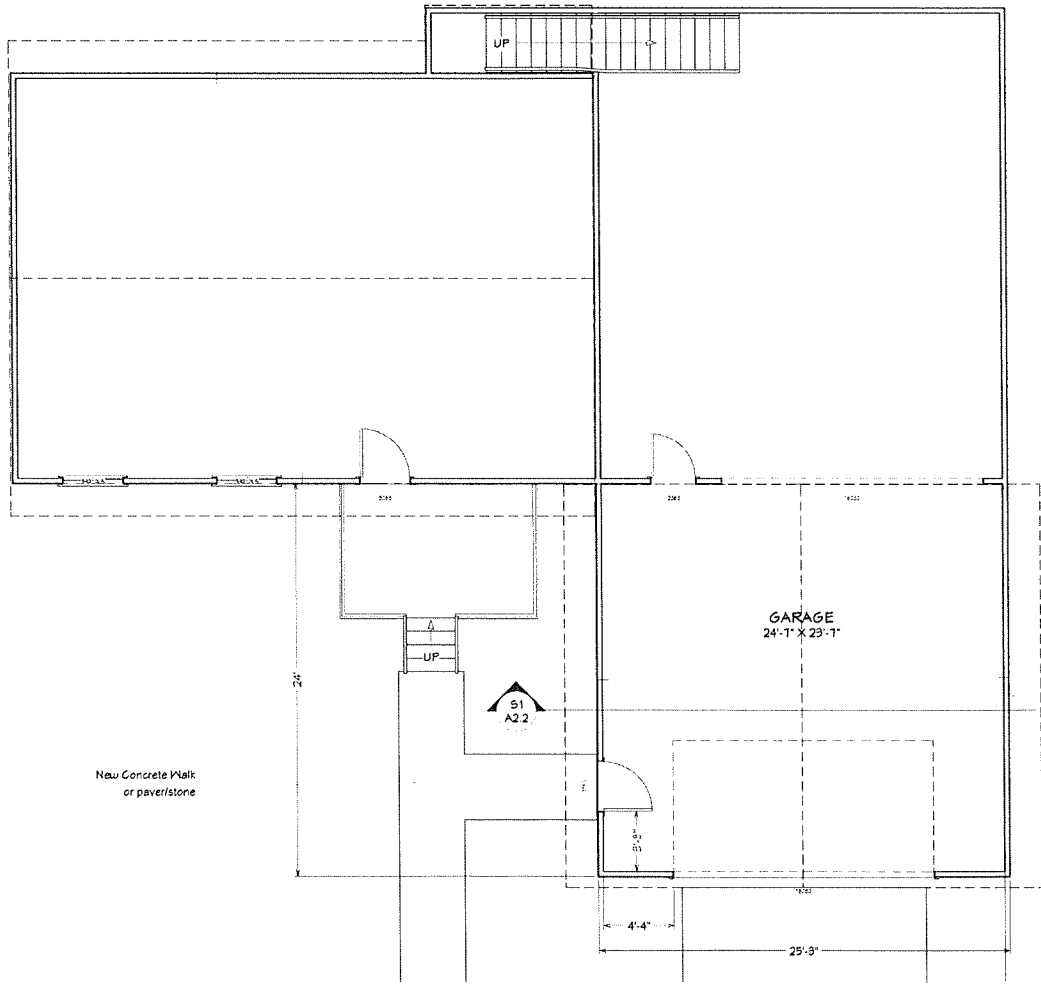
Plot Plan View



Sark & Associates, Inc.  
 47449 Pontiac Tr, Ste 147  
 Wixom, Michigan 48395  
 www.sarkassoc.com  
 greg@sarkassoc.com

**Project Information**  
 4925 Ormond Rd  
 White Lake, Michigan 48383





Vinyl siding on  
7/16" sheathing on  
2x4 @ 16" o.c. framed walls  
w/double top plate to match  
top of existing garage walls

First Floor Plan  
Scale 1/4" = 1'

Revision Number	Date	Revised By	Description
05	5/26/21	Ferris	

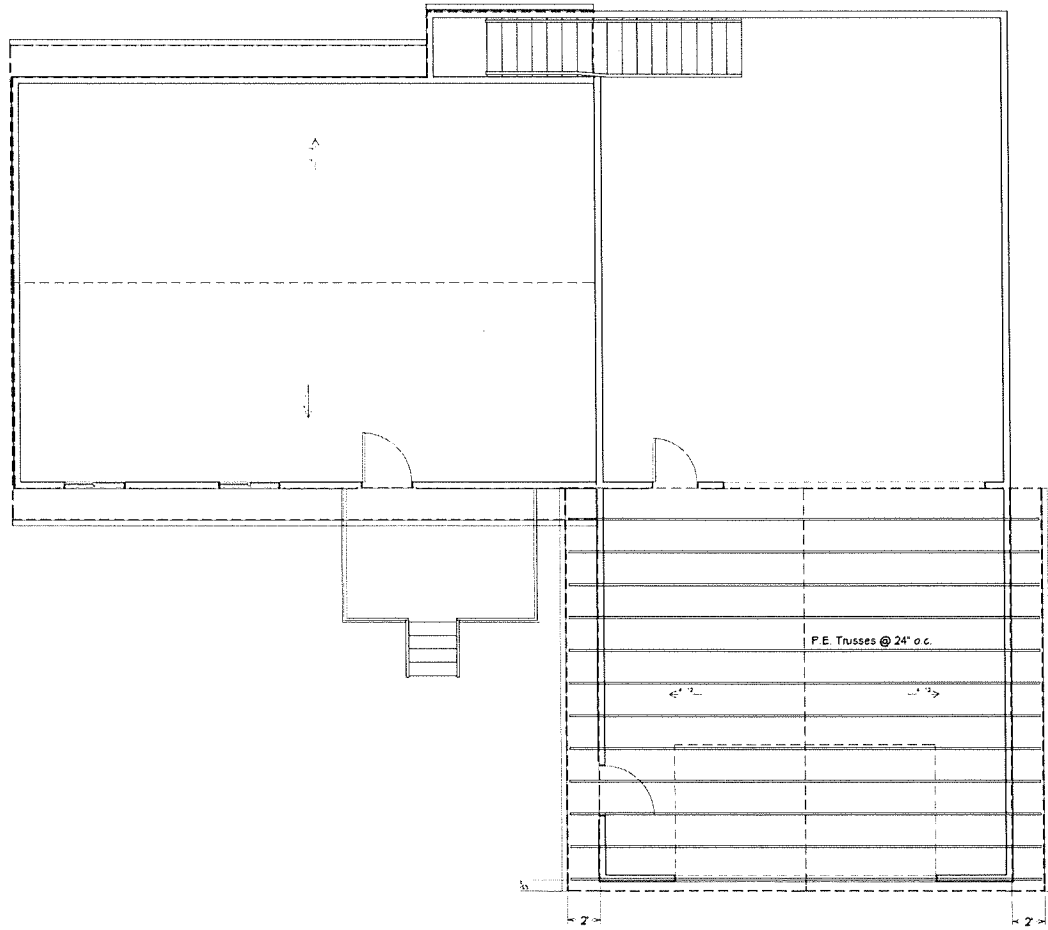
First Floor Plan

**Project Information**  
4925 Ormond Rd  
White Lake, Michigan 48383

**SARK & ASSOCIATES**  
ENGINEERS • CONSULTANTS  
47445 Perrine, Suite 347  
Livonia, Michigan 48150  
greg@sarkassoc.com



9/6/21  
A12



Roof Plan

Scale 1/4" = 1'

Revision Table	Date	Revised By	Description
Number	2/16/21	GS	Permits

Roof Plan

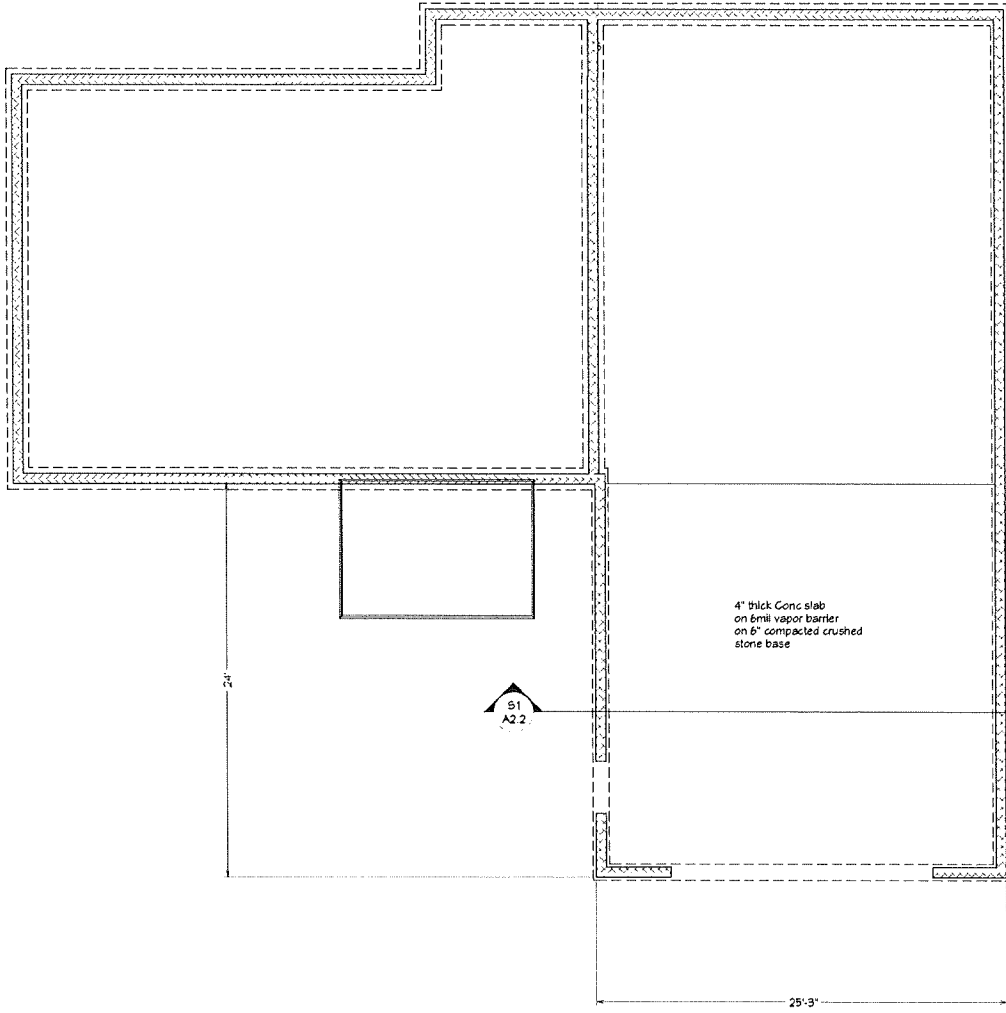
**Project Information**  
 4925 Ormond Rd  
 White Lake, Michigan 48383

**SARK & ASSOCIATES**  
 ENGINEERS • CONSULTANTS  
 47445 Peridot Trl, Ste. 1417  
 Farmington Hills, Michigan 48334  
 gs@gsark.com



9/6/21

A13



Foundation Plan  
Scale 1/4" = 1'

Revision Number	Date	Revised By	Description
05	8/06/2021		Permits

Foundation Plan

Project Information  
4925 Ormond Rd  
White Lake, Michigan 48383

SARK & ASSOCIATES  
ENGINEERS • CONSULTANTS  
47445 Perimeter Trl, Ste 1417  
Livonia, Michigan 48150  
greg@sarkassoc.com

9/6/21

A1.1



Design in accordance with Michigan Residential Code 2015

CODE REQUIREMENTS

R311.7 STAIRWAYS

R311.7.1 WIDTH STAIRWAYS SHALL NOT BE LESS THAN 36" IN CLEAR WIDTH. HANDRAILS SHALL NOT PROJECT MORE THAN 4.5" ON EITHER SIDE OF THE STAIRWAY AND THE MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL NOT BE LESS THAN 31.5".  
 R311.7.4.1 RISER HEIGHT. THE MAXIMUM RISER HEIGHT SHALL BE 8-1/4".  
 R311.7.4.2 TREAD DEPTH. THE MINIMUM TREAD DEPTH SHALL BE 9".

R311.7.8 HANDRAILS

HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS. R311.7.8.1 HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, SHALL NOT BE LESS THAN 34" AND NOT MORE THAN 38".

R213 GUARDRAILS

GUARDS SHALL BE A MINIMUM OF 36" HIGH ALONG OPEN-SIDED FLOOR AREAS 30" ABOVE ADJACENT FINISHED FLOORS OR 34" HIGH ALONG STAIRS WITH A TOTAL RISE OF MORE THAN 30" ABOVE ADJACENT FINISHED FLOORS OR GRADE. HANDRAIL AND BALUSTRADE SHALL BE CONSTRUCTED ACCORDING TO MRC-312.2 SPACING SHALL BE SUCH THAT A 4" SPHERE CANNOT PASS THROUGH.

R314 SMOKE ALARMS

SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:  
 1. IN EACH SLEEPING ROOM.  
 2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS.  
 3. ON EACH ADDITIONAL STORY OF THE DWELLING, NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS, WHEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT, THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. THE ALARM SHALL BE CLEARLY AUDIBLE IN ALL BEDROOMS OVER BACKGROUND NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED.

R315 CARBON MONOXIDE ALARMS

CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:  
 1. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS (FOR DWELLING UNITS WITH FUEL-FIRED APPLIANCES)

R316 FOAM PLASTIC

ALL FOAM PLASTIC SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 75 WITH AN ACCOMPANYING SMOKE DEVELOPED INDEX NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 123.

R317

PROTECTION AGAINST DECAY SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS BY USE OF NATURALLY DURABLE WOOD OR WOOD THAT IS PRESERVATIVE TREATED IN ACCORDANCE WITH ANPA U1 FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF ANPA U1.  
 1. WOOD JOISTS OR THE BOTTOM OF A WOOD STRUCTURAL FLOOR WHEN CLOSER THAN 18" OR WOOD GIRDERS WHEN CLOSER THAN 12" TO THE EXPOSED GROUND IN CRAWL SPACES OR UN-EXCAVATED AREA LOCATED WITHIN THE PERIPHERY OF THE BUILDING FOUNDATION.  
 2. ALL WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8" FROM THE EXPOSED GROUND.  
 3. SILLS AND SLEEPERS ON A CONCRETE OR MASONRY SLAB THAT IS IN DIRECT CONTACT WITH THE GROUND UNLESS SEPARATED FROM SUCH SLAB BY AN IMPERVIOUS MOISTURE BARRIER.  
 4. THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS HAVING CLEARANCES OF LESS THAN 1/2" ON TOPS, SIDES, AND ENDS.  
 5. WOOD SIDING, SHEATHING AND WALL FRAMING ON THE EXTERIOR OF A BUILDING HAVING A CLEARANCE OF LESS THAN 6" FROM THE GROUND.  
 6. WOOD STRUCTURAL MEMBERS SUPPORTING MOISTURE-PERMEABLE FLOORS OR ROOFS THAT ARE EXPOSED TO THE WEATHER, SUCH AS CONCRETE OR MASONRY SLABS, UNLESS SEPARATED FROM SUCH FLOORS OR ROOFS BY AN IMPERVIOUS MOISTURE BARRIER.  
 7. WOOD FURRING STRIPS OR OTHER WOOD FRAMING MEMBERS ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY WALLS OR CONCRETE WALLS BELOW GRADE EXCEPT WHERE AN APPROVED VAPOR RETARDER IS APPLIED BETWEEN THE WALL AND THE FURRING STRIPS OR FRAMING MEMBERS.

R403.1.6 FRAMING ANCHOR TO FOUNDATION

PROVIDE TREATED SILL PLATE WITH SILL SEALER & MIN 1/2" DIAMETER ANCHOR BOLTS MINIMUM 1" INTO FOUNDATION, AT 6' O.C., MIN 12" FROM END, OR APPROVED ANCHORS OR ANCHOR STRAPS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE (SIMPSON MAB STRAP ANCHORS AT 42" O.C. MAX)

R502.6 JOIST BEARING

FLOOR JOISTS SHALL HAVE A MIN BEARING OF 1-1/2" ON WOOD, 3" MIN ON CONCRETE - OR AS OTHERWISE SPECIFIED IN MRC-502.6. JOIST HANGERS AND CONNECTORS TO MEET BEARING REQUIREMENTS OF MRC 502.6.

R502.8

CUTTING AND NOTCHING OF FLOOR JOISTS SHALL NOT EXCEED THE LIMITATIONS OF MRC 502.8. LATERAL SUPPORT OF JOISTS SHALL BE PROVIDED PER MRC 502.7.

R502.12 DRAFTSTOPPING AND FIREBLOCKING

DRAFT STOPPING SHALL MEET REQUIREMENTS FOR SINGLE FAMILY RESIDENCES IN ACCORDANCE WITH MRC 302.12. FIREBLOCKING SHALL MEET REQUIREMENTS FOR SINGLE FAMILY RESIDENCES IN ACCORDANCE WITH MRC-302.11

R602

ALL WALL LUMBER USED WILL MEET REQUIREMENTS OF MRC-602. CUTTING AND NOTCHING OF EXTERIOR WALLS STUDS OR INTERIOR BEARING WALLS STUDS SHALL NOT EXCEED 25% OF THE COMPONENT WIDTH PER MRC-602.6. DRILLING OR BORING OF STUDS WILL MEET THE REQUIREMENTS OF MRC-602.6.  
 FRAME OPENING - AT EACH WALL OPENING ADD 1/2 THE TOTAL OF STUDS DISPLACED TO EACH SIDE OF THE OPENING (FULL HEIGHT) AND USE ONE TRIMMER STUD BELOW THE HEADER AT EACH END UNLESS NOTED OTHERWISE ON THE PLANS.

R602.8 FIRESTOPPING

FIRE STOPPING SHALL MEET THE REQUIREMENTS FOR SINGLE FAMILY RESIDENCES IN ACCORDANCE WITH MRC-302.11. FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS, BOTH VERTICAL AND HORIZONTAL, AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:  
 1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES VERTICALLY AT THE CEILING AND FLOOR LEVELS AND HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'.  
 2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILING AND COVE CEILING.  
 3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN.  
 4. AT OPENINGS AROUND VENTS, PIPES, AND DUCTS AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION.  
 5. CHIMNEYS AND FIREPLACES ACCORDING TO MRC-1001.16.

R602.10

ALL WALLS TO MEET BRACED WALL PANEL REQUIREMENTS PER R602.10 OR R602.12. ALL STRUCTURAL DESIGN CRITERIA TO BE IN ACCORDANCE WITH R301.1.

R703.4 WALL FLASHING

APPROVED CORROSION-RESISTIVE FLASHING SHALL BE INSTALLED AT ALL OF THE FOLLOWING LOCATIONS:  
 1. AT TOP OF ALL EXTERIOR WINDOWS AND DOOR OPENINGS.  
 2. AT THE INTERSECTION OF CHIMNEYS OR OTHER MASONRY CONSTRUCTION.  
 3. UNDER AND AT THE ENDS OF MASONRY, WOOD, OR METAL COPINGS AND SILLS.  
 4. CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM.  
 5. WHERE EXTERIOR PORCHES, DECKS, OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION.  
 6. AT WALL AND ROOF INTERSECTIONS.  
 7. AT BUILT-IN GUTTERS.

R806.1 ROOF VENTILATION REQUIRED

ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE GROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATING OPENINGS SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE MESH, WITH 1/16" MINIMUM TO 1/4" MAXIMUM OPENINGS.

R806.2 ATTIC VENTILATION MINIMUM AREA

THE TOTAL NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1 TO 150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT THE TOTAL AREA IS PERMITTED TO BE REDUCED TO 1 TO 300, PROVIDED AT LEAST 40% AND NOT MORE THAN 50% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3' ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS.

R806.3 VENT CLEARANCE

WHERE EAVE OR CORNICE VENTS ARE INSTALLED, INSULATION SHALL NOT BLOCK THE FREE FLOW OF AIR. A MINIMUM OF A 1" SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING AT THE LOCATION OF THE VENT.

R807.1 ATTIC ACCESS

IN BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION, AN ATTIC ACCESS OPENING SHALL BE PROVIDED TO ATTIC AREAS THAT EXCEED 30 SQUARE FEET AND A VERTICAL HEIGHT OF 30" OR GREATER. THE ROUGH-FRAMED OPENING SHALL NOT BE LESS THAN 22"x30" AND SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION. A 30" MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE PROVIDED AT SOME POINT ABOVE THE OPENING.

R903.2 ROOF FLASHING

FLASHINGS SHALL BE INSTALLED IN SUCH A MANNER SO AS TO PREVENT MOISTURE ENTERING THE WALL AND ROOF THROUGH JOINTS IN COPINGS, THROUGH MOISTURE PERMEABLE MATERIALS, AND AT INTERSECTIONS WITH PARAFET WALLS AND OTHER PENETRATIONS THROUGH THE ROOF PLANE.

R903.2.1 FLASHING LOCATIONS

FLASHINGS SHALL BE INSTALLED AT WALL AND ROOF INTERSECTIONS WHEREVER A CHANGE IN ROOF SLOPE OR DIRECTION, AND AROUND ROOF OPENINGS. FLASHING SHALL BE INSTALLED TO DIVERT WATER AWAY FROM WHERE THE EAVE OF A SLOPED ROOF INTERSECTS A VERTICAL SIDEWALL, WHERE FLASHING IS OF METAL, THE METAL SHALL BE CORROSION RESISTANT WITH A THICKNESS OF NOT LESS THAN 0.014" (NO. 26 GALVANIZED STEEL).

R905.2.1

ICE AND WATER SHIELD SHALL BE INSTALLED FROM THE EAVE EDGE TO 24" INSIDE THE EXTERIOR WALL LINE OF THE BUILDING, ON ROOFS WITH SLOPES EQUAL TO OR GREATER THAN 8/12 PITCH. THE ICE BARRIER SHALL ALSO BE APPLIED NOT LESS THAN 36" MEASURED ALONG THE ROOF SLOPE FROM THE EAVE EDGE OF THE BUILDING.

R905.2.8

BASE AND CAP FLASHING, VALLEY FLASHING, SIDEWALL FLASHING, AND DRIP EDGES, AND OTHER FLASHINGS FOR ASPHALT SHINGLES SHALL COMPLY WITH THE REQUIREMENTS OF MRC 905.2.8.

FIELD CONDITIONS:

- GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE FULLY RESPONSIBLE FOR FIELD CHECKING ALL EXISTING CONDITIONS AND FOR COORDINATING THEIR WORK TO NEW AND EXISTING WORK.
- NOTIFY THE OWNER IMMEDIATELY WHERE THERE ARE INCONSISTENT OR CONFLICTING DIMENSIONS ON THE DRAWINGS AND OR WHERE THERE IS CONFLICT BETWEEN WORK SHOWN ON THE DRAWINGS AND FIELD CONDITIONS.
- EACH CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR HIS WORK WHERE HE FAILS TO CHECK SUCH CONDITIONS AND/OR GIVE NOTICE TO THE OWNER FOR SAID DISCREPANCIES.
- ERRORS AND OMISSIONS WHICH MAY OCCUR IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER, IN WRITING, AND WRITTEN INSTRUCTION SHALL BE OBTAINED PRIOR TO PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ERRORS, DISCREPANCIES, OR OMISSIONS FOR WHICH THE CONTRACTOR FAILED TO NOTIFY THE OWNER PRIOR TO CONSTRUCTION AND/OR FABRICATION OF THE WORK.

DAMAGE:

- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE OR INJURY TO THE OWNER THROUGH IMPROPER WORKMANSHIP AND SHALL REPAIR OR PAY FOR THE REPAIRS NECESSARY TO CORRECT THE WORK OF OTHER TRADES OR MATERIALMEN.
- WHERE SAID DAMAGE IS NOT PROPERLY CORRECTED WHEN ORDERED, THE OWNER MAY DIRECT OTHERS TO PERFORM AND HAVE THE COST FOR SAID WORK 'BACK CHARGED' AGAINST THE CONTRACTOR OR OFFENDING PARTY.

MANUFACTURERS SPECIFICATIONS:

- ALL MATERIAL WHICH ARE TO BE DELIVERED, STORED, MOVED, APPLIED OR ATTACHED, AND FINISHED PER THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATION, SHALL COMPLY WITH LOCAL, STATE, FEDERAL CODES AND UTILITY COMPANY REGULATIONS.
- WHERE THESE DRAWINGS AND SPECIFICATIONS CONFLICT WITH SAID REQUIREMENTS, IMMEDIATE NOTICE SHALL BE GIVEN TO THE OWNER.

R905.2.2 ROOF SLOPE AND UNDERLAYMENT

ASPHALT SHINGLES SHALL ONLY BE USED ON ROOF SLOPES OF 2/12 OR GREATER. FOR ROOF SLOPES OF 2/12 TO 4/12 DOUBLE UNDERLAYMENT APPLICATION IS REQUIRED PARALLEL TO AND STARTING AT THE EAVES WITH A 14" OVERLAP. ROOF SLOPES OF 4/12 OR GREATER UNDERLAYMENT SHALL BE APPLIED SHINGLE FASHION, PARALLEL TO AND STARTING FROM THE EAV AND LAPPED 2" FASTENED SUFFICIENTLY TO HOLD IN PLACE. END LAP'S SHALL BE 4" AND OFFSET BY 6".

APPLIED LOADS

FLOOR LIVE LOADS:

NON-SLEEPING AREAS: 40 PSF  
 SLEEPING AREAS: 30 PSF  
 ATTIC W/STORAGE: 20 PSF  
 ATTIC W/O STORAGE: 10 PSF

DEAD LOADS:

FLOOR: 12 Psf Hardwood  
 15 Psf Ceramic Tile  
 10 Psf Carpet + Pad  
 10 Psf  
 8 Psf (Interior Walls)  
 13 Psf (Exterior Walls)

ENVIRONMENTAL LOADS:

GROUND SNOW: 25 PSF  
 DESIGN WIND SPEED: 110 MPH, EXPOSURE B

BEAM DEFLECTION CRITERIA

L/360 FOR LIVE LOAD  
 L/240 FOR TOTAL LOAD

WOOD SPECIFICATIONS:

LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING PROPERTIES:  
 F<sub>b</sub> = 2,800 psi, E = 2,000,000 psi UNLESS NOTED OTHERWISE

ALL DIMENSIONAL LUMBER SHALL BE MINIMUM DOUG-FIR #2 OR BETTER, INCLUDING HEADERS, JOISTS, AND STUDS - UNLESS NOTED OTHERWISE

POSTS AND CONCENTRATED LOADS SHALL EXTEND TO SOLID BEARING, OR SOLID BLOCKING IS REQUIRED BELOW POSTS AND CONCENTRATED LOADS TO SOLID BEARING BELOW.

ALL STRUCTURAL CONNECTIONS SHOULD BE MADE WITH APPROVED CONNECTORS - FOLLOW MANUFACTURERS RECOMMENDED FASTENING AND PROCESSES.

NOTCHING AND DRILLING OF STRUCTURAL MEMBERS IS PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER. FOR ENGINEERED LUMBER CONSULT WITH MANUFACTURERS RECOMMENDED PRACTICES.

STEEL SPECIFICATIONS:

ALL STEEL BEAMS ARE MINIMUM GRADE A-36 UNLESS NOTED OTHERWISE  
 ALL STEEL COLUMNS ARE MINIMUM GRADE C-42 UNLESS NOTED OTHERWISE

CONCRETE SPECIFICATIONS:

ALL CONCRETE TO BE MINIMUM 3000 psi (28 day strength).  
 SOIL BEARING PRESSURE ASSUMED TO BE 2000 psi. IF ADVERSE CONDITIONS ARE FOUND PLEASE NOTIFY THE ENGINEER.

ALL FABRICATIONS AND PLACING OF REINFORCING BARS SHALL FOLLOW THE A.C.I. MANUAL STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (A.C.I. 315 LATEST A318)

Revision	Date	Description
1	05-20-20	Permits

General Notes

Project Information

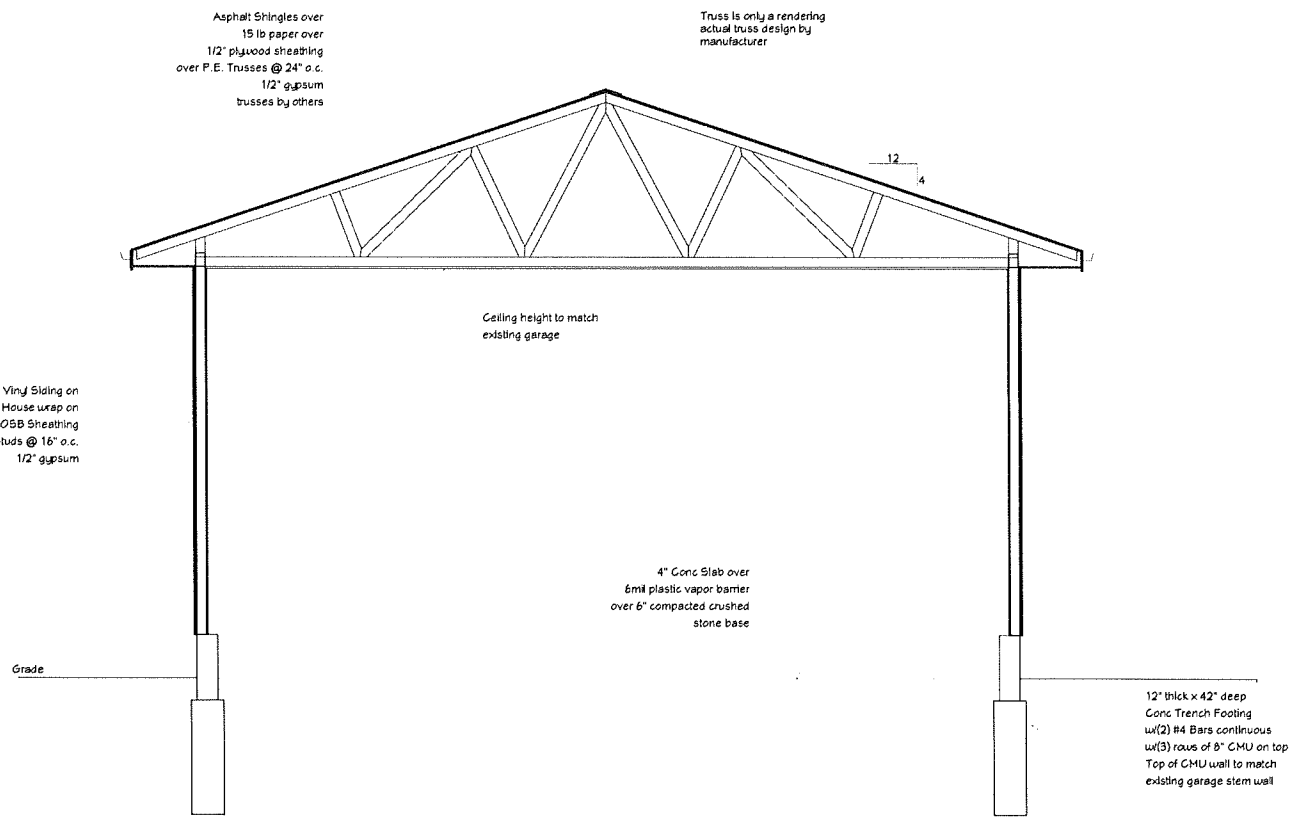
4925 Ormond Rd  
 White Lake, Michigan 48303

**SARK & ASSOCIATES**  
 ENGINEERS • CONSULTANTS  
 47448 Perimeter, 5th Fl., Suite 417  
 White Lake, Michigan 48303  
 greg@csarkassociates.com



9/6/21

A.0.1



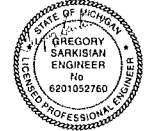
51 Garage Section  
A2 3 Scale 1/2" = 1'

Revision Number	Date	Revised By	Description
01	11-25-2021	GP	Permits

Sections

**Project Information**  
4925 Ormond Rd  
White Lake, Michigan 48383

**SARK & ASSOCIATES**  
ENGINEERS • CONSULTANTS  
47445 Fenwick Trl, Ste 147  
White Lake, Michigan 48383  
greg@sarkassoc.com



9/6/21

A2 2



Rendering only  
Garage door style per owner

Asphalt Shingles to  
match existing house

Viny Siding  
Color and style  
per owner

Grade

Front Elevation  
Scale 1/4" = 1'

Number	Date	Revised By	Description
	9/25/21	GS	PERMS

Elevations

Project Information  
4925 Ormond Rd  
White Lake, Michigan 48383

**SARK & ASSOCIATES**  
Business • Commercial  
47445 Forthick Trl, Ste 147  
Livonia, Michigan 48153  
greg@sarkassoc.com



9/6/21

A2.1

Rik Kowall, Supervisor  
 Anthony L. Noble, Clerk  
 Mike Roman, Treasurer



Trustees  
 Scott Ruggles  
 Liz Fessler Smith  
 Andrea C. Voorheis  
 Michael Powell

## WHITE LAKE TOWNSHIP

7525 Highland Road • White Lake, Michigan 48383-2900 • (248) 698-3300 • www.whitelaketwp.com

October 13, 2021

Martin Gojcaj  
 PO Box 252  
 Clarkston, MI 48347

RE: Proposed attached garage and 2<sup>nd</sup> story addition at 4925 Ormond

Based on the submitted plans and scaled aerial views of the property, the proposed residential addition does not satisfy the White Lake Township Clear Zoning Ordinance for R1-D zoning district.

**Article 3.1.6 of the White Lake Township Clear Zoning Ordinance:** Requires a minimum front yard setback of 30 ft and minimum side yard setback of 10 ft and maximum lot coverage of 20%

The existing structure is legal non-conforming. The 9,191 sq ft lot contains a residential structure; having approximately a 40 ft front yard setback and 6 ft side yard setback on the north side. The proposed addition would maintain the non-conformity on the side yard and create an additional 14 ft non-conformity to the front yard setback. The maximum lot coverage will also be considered as the addition will most likely put the lot coverage over 20%.

Approval of the building plans would be subject to a variance to the schedule of regulations, Article 7 of the White Lake Township Clear Zoning Ordinance. To be eligible for the December 9<sup>th</sup> Zoning Board of Appeals (ZBA) meeting, application must be submitted to the White Lake Township Planning Department no later than November 4<sup>th</sup> at 4:30 PM. **A certified boundary and location survey will be required by the ZBA.** The Planning Department can be reached at (248)698-3300, ext. 5

Sincerely,

Nick Spencer, Building Official  
 White Lake Township

# WHITE LAKE TOWNSHIP ZONING BOARD OF APPEALS

## REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

**TO:** Zoning Board of Appeals  
**FROM:** Justin Quagliata, Staff Planner  
**DATE:** December 9, 2021

---

**Agenda item:** 7c

**Appeal Date:** December 9, 2021

**Applicant:** John Rozanski

**Address:** 2704 Wabum Road  
White Lake, MI 48386

**Zoning:** RM-2 Multiple Family and R1-D Single Family

**Location:** 8565 Pontiac Lake Road  
White Lake, MI 48386



### **Property Description**

The 3.19-acre parcel identified as 8565 Pontiac Lake Road is located on Pontiac Lake and zoned RM-2 (Multiple Family) and R1-D (Single Family Residential). The centerline of the Pontiac Lake Road right-of-way serves as the boundary for the split zoning of this property; the land north of the centerline is zoned R1-D and the land south of the centerline is zoned RM-2. There are two existing one-story buildings on the south side of the Pontiac Lake Road right-of-way (east building: 1,905 square feet; west building: 1,915 square feet). The site is served by a private well for potable water and an existing sanitary sewer grinder pump station.

### **Applicant's Proposal**

John Rozanski, the applicant, is requesting an extension of the approval period for variances granted by the Zoning Board of Appeals on June 24, 2021 associated with the construction of a 12-unit apartment building on the south side of Pontiac Lake Road.

### **Planner's Report**

The staff report for the original approval (attached) should be referenced for a more complete overview of the project.

In accordance with Article 7, Section 39 of the zoning ordinance, no order of the Zoning Board of Appeals permitting the erection or alteration of a building shall be valid for a period longer than six (6) months, unless a building permit for such erection or alteration is obtained within such period, and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit. Variances were granted for the project on June 24, 2021, and therefore expire on December 24, 2021. At its meeting on October 21, 2021 the Planning Commission approved the final site plan for the project. In a letter addressed to the Zoning Board of Appeals dated November 3, 2021, the applicant requested a six-month extension to allow the variances to remain valid. If the requested extension is granted, the approval period for the previous variances will terminate on June 24, 2022.

The requested variance is listed in the following table.

<b>Variance #</b>	<b>Ordinance Section</b>	<b>Subject</b>	<b>Standard</b>	<b>Requested Variance</b>	<b>Result</b>
1	Article 7.39	Approval Periods	6 months	6 months	12 months

**Zoning Board of Appeals Options:**

**Approval:** I move to approve the variance requested by John Rozanski from Article 7.39 of the Zoning Ordinance for Parcel Number 12-13-328-003, identified as 8565 Pontiac Lake Road, in order to extend the approval period for variances granted on June 24, 2021 by six months, until June 24, 2022. This approval will have the following conditions:

- All conditions of previous approvals shall remain in effect.

**Denial:** I move to deny the variance requested by John Rozanski for Parcel Number 12-13-328-003, identified as 8565 Pontiac Lake Road, due to the following reason(s):

**Table:** I move to table the variance request of John Rozanski for Parcel Number 12-13-328-003, identified as 8565 Pontiac Lake Road, to consider comments stated during this public hearing.

**Attachments:**

1. Staff report dated June 24, 2021.
2. Applicant's written statement dated November 3, 2021.
3. Minutes of the June 24, 2021 Zoning Board of Appeals meeting.

### 7.37 STANDARDS

General variances: The Zoning Board of Appeals may authorize a variance from the strict application of the area or dimensional standard of this Ordinance when the applicant demonstrates all of the following conditions "A - E" or condition F applies.

- A. Practical difficulty: A practical difficulty exists on the subject site (such as exceptional narrowness, shallowness, shape or area; presence of floodplain; exceptional topographic conditions) and strict compliance with the zoning ordinance standards would unreasonably prevent the owner from using of the subject site for a permitted use or would render conformity unnecessarily burdensome. Demonstration of a practical difficulty shall have a bearing on the subject site or use of the subject site, and not to the applicant personally. Economic hardship or optimum profit potential are not considerations for practical difficulty.
- B. Unique situation: The demonstrated practical difficult results from exceptional or extraordinary circumstances or conditions applying to the subject site at the time the Ordinance was adopted or amended which are different than typical properties in the same zoning district or the vicinity.

- C. Not self created: The applicants problem is not self created.
- D. Substantial justice: The variance would provide substantial justice by granting the property rights similar to those enjoyed by the majority of other properties in the vicinity, and other properties in the same zoning district. The decision shall not bestow upon the property special development rights not enjoyed by other properties in the same district, or which might result in substantial adverse impacts on properties in the vicinity (such as the supply of light and air, significant increases in traffic, increased odors, an increase in the danger of fire, or other activities which may endanger the public safety, comfort, morals or welfare).
- E. Minimum variance necessary: The variance shall be the minimum necessary to grant relief created by the practical difficulty.
- F. Compliance with other laws: The variance is the minimum necessary to comply with state or federal laws, including but not necessarily limited to:
- i. The Michigan Right to Farm Act (P.A. 93 of 1981) and the farming activities the Act protects;
  - ii. The Americans with Disabilities Act of 1990 (as amended), and the needs of handicapped individuals the Act protects, including accessory facilities, building additions, building alterations, and site improvements which may not otherwise meet a strict application of the standards of this Ordinance.

Under no circumstances shall the Board of Appeals grant a variance to allow a use not permissible under the terms of this Ordinance in the district involved, or any use expressly or by implication prohibited by the terms of this Ordinance in said district.

# WHITE LAKE TOWNSHIP ZONING BOARD OF APPEALS

## REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

**TO:** Zoning Board of Appeals  
**FROM:** Justin Quagliata, Staff Planner  
**DATE:** June 24, 2021

---

**Agenda item:** 6a

**Appeal Date:** June 24, 2021

**Applicant:** John Rozanski

**Address:** 2704 Wabum Road  
White Lake, MI 48386

**Zoning:** RM-2 Multiple Family and R1-D Single Family

**Location:** 8565 Pontiac Lake Road  
White Lake, MI 48386

## **Property Description**

The 3.19-acre parcel identified as 8565 Pontiac Lake Road is located on Pontiac Lake and zoned RM-2 (Multiple Family) and R1-D (Single Family Residential). The centerline of the Pontiac Lake Road right-of-way serves as the boundary for the split zoning of this property; the land north of the centerline is zoned R1-D and the land south of the centerline is zoned RM-2. There are two existing one-story buildings on the south side of the Pontiac Lake Road right-of-way (east building: 1,905 square feet; west building: 1,915 square feet). The site is served by a private well for potable water and an existing sanitary sewer grinder pump station, which with upgrades would service the proposed building.

## **Applicant's Proposal**

John Rozanski, the applicant, is proposing to demolish the existing buildings and construct a 12-unit apartment building on the south side of Pontiac Lake Road.

## **Planner's Report**

At its February 18, 2021 meeting the Planning Commission recommended approval of the preliminary site plan to the Township Board. Variances were required, and at its February 25, 2021 meeting the Zoning Board of Appeals (ZBA) denied all of the requested variances. A revised site plan was submitted to address some of the comments from the February ZBA meeting. At its June 17, 2021 meeting the Planning Commission recommended approval of the revised preliminary site plan, subject to the applicant receiving approval from the ZBA.

Some changes between the prior proposal and current request include:

- Reduction of two units, from 14 to 12.
- Overall reduction in building size of 1,096 square feet.
  - 368 square foot reduction on both the first floor and garden level.
  - 360 square foot reduction on the second floor.
- The building, including balconies and patios, was moved out of the 25-foot Natural Features setback from the wetland.
- The proposed sidewalk was relocated within the Pontiac Lake Road right-of-way.

The project consists of one two-story building with a garden level (basement) totaling 11,871 square feet in size with six, two-bedroom units and six, one-bedroom units. The garden (basement) and first levels are each 3,997 square feet in size and contain two, one-bedroom units and two, two-bedroom units; the second level is 3,877 square feet in size and contains two, one-bedroom units and two, two-bedroom units. All of the one-bedroom units are 680 square feet in size and all of the two-bedroom units are 1,005 square feet in size. The floor plans show all of the two-bedroom units include an area labeled "bedroom/study." All of these rooms contain a closet and window and could be converted to a third bedroom with a wall extension and door.

The units would still meet the minimum floor area required per dwelling unit if the two-bedroom units were converted to three-bedroom units in the future. For multiple-family residential, one-bedroom/efficiency units must be a minimum of 400 square feet in area, two-bedroom units must be a minimum of 700 square feet in area, and three-bedroom units must be a minimum of 850 square feet in area. Additionally, the lot size would still be sufficient if the two-bedroom units became three-bedroom units in the future. For a 12-unit building consisting of six, one-bedroom units and six, two-bedroom units, the minimum lot size required is 51,000 square feet (1.17 acres). An additional 2,500 square feet of lot area is required (and available) to accommodate the conversion of the two-bedroom units to three-bedroom units. For reference, the minimum lot area method of calculation is: 10,000 square feet for the first unit, plus 3,500 square feet for each additional one-bedroom unit, 4,000 square feet for each additional two-bedroom unit, and 4,500 square feet for each additional three-bedroom unit.

The minimum side yard setback in the RM-2 zoning district is 70 feet on one side, 100 feet total of two sides. The proposed side yard west of the building is 40 feet; therefore, a 30-foot variance is being requested. To the east of the building the proposed side yard is 30 feet. For reference, the property to the east is zoned R1-C (Single Family Residential) and the property to the west is zoned RM-2. On the previous plan, the east side yard was 27.7-feet and the west side yard was 30-feet. A 42.3-foot variance was previously requested for the east side yard. Overall, the side yard variance request was reduced by 12.3-feet, from 42.3-feet to 30-feet.

Parking setback variances are also being requested. The zoning ordinance requires parking for non-single family residential and non-residential uses to meet the front yard setback requirement of the underlying zoning district; however, parking in a required front yard may be permitted, except for the first 20 feet which must be a greenbelt and landscaped in conformance with the standards of the ordinance. The minimum front yard setback in the RM-2 zoning district is 40 feet. At its closest point (the northwest corner) the parking lot is located 10 feet from the south right-of-way line of Pontiac Lake Road. A 20-foot greenbelt is not proposed, so the applicant is requesting a 30-foot variance for the front parking setback.

Parking for non-single family residential and non-residential uses may be permitted in a side yard setback, if all greenbelt and/or screening requirements of the ordinance have been met. The zoning ordinance offers options to provide an appropriate amount of screening between properties based on the zoning of an adjacent parcel. Following are the screening options outlined in the zoning ordinance based on the zoning of the subject site and adjacent properties to the east and west:

- Land Form Buffer
  - Height: 3-foot berm with a 2-foot crown and maximum 3:1 slope; 20 feet in width
  - Planting Requirements: 1 large deciduous, 1 evergreen tree and 8 shrubs for every 30 linear feet

- Buffer Strip and Obscuring Fence
  - 1 large deciduous or evergreen tree and 4 shrubs for every 15 linear feet; 20 feet in width
  - 6-foot-tall fence
  
- Screen Wall
  - Height: 6 feet
  - Width: 8 inches of brick, or decorative concrete
  - Planting Requirements: 5-foot greenbelt (1 large deciduous or evergreen tree and 8 shrubs for every 30 linear feet) adjacent to screen wall for its entire length

The parking lot is located five feet from the west side lot line and 13.5 feet from the east side lot line, with no screening as previously described proposed; therefore, the applicant is requesting a 65-foot variance for the west side parking setback and a 16.5-foot variance for the east side parking setback. On the previous plan, the east and west sides of the parking lot were both located five feet from the side lot lines, and the requested variances were 25-feet on the west side 65-feet on the east side.

Article 5, Section 19.N.i.C states trash enclosures are not permitted within a required front yard setback, nor closer to the front lot line than the principal building. The proposed dumpster enclosure is located closer to Pontiac Lake Road than the apartment building, and does not meet the front yard setback. A 38-foot variance is required to encroach into the front yard, and a 2.5-foot variance is required to encroach into the front yard setback. Since the previous plan, the projection in front of the building was reduced eight feet (from 46 feet).

The zoning ordinance requires curbing for the construction of a parking area in order to control stormwater flow from the parking area and in order to protect landscape areas, such as landscape islands and other plantings. Stormwater is proposed to be detained by installation of underground detention with a pre-treatment structure. A permit is required from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for discharge into the Huron River/wetland. Article 5, Section 19.B.v states all required landscape areas and screen walls which abut vehicular drives, parking or other use areas shall be separated from the vehicular use area with a six (6) inch minimum curb of concrete construction. Additionally, Article 5, Section 11.Q.xviii states concrete curbing shall be provided at the end of all parking areas and stalls. The submitted site plan does not show the required curbing. Therefore, the applicant is requesting a variance to waive the installation of curbing.

In the RM-2 zoning district the minimum lot width is 200 feet. At 170-feet wide, the applicant is requesting a 30-foot variance to address the width deficiency.

The requested variances are listed in the following table.

<b>Variance #</b>	<b>Ordinance Section</b>	<b>Subject</b>	<b>Standard</b>	<b>Requested Variance</b>	<b>Result</b>
1	Article 3.1.9.E	Side yard setback	70 feet on one side, 100 feet total	30 feet (west)	40 feet
2	Article 3.1.9.E	Minimum lot width	200 feet	30 feet	170 feet
3	Article 5.11.Q.xviii	Off-Street Parking Space Layout, Standards, Construction and Maintenance	Concrete Curbing	Waive the installation of concrete curbing	No concrete curbing
4	Article 5.11.A.iii	Parking setback – side yard	30 feet – east 70 feet – west	16.5 feet – east 65 feet – west	13.5 feet (east) 5 feet (west)
5	Article 5.11.A.iv	Parking setback – front yard	40 feet	30 feet	10 feet
6	Article 5.19.N.i.C	Dumpsters & trash storage enclosures	40 feet – front yard 0 feet – projection	2.5 feet – front yard 38 feet – projection	37.5 feet – front yard 38 feet – projection



## Zoning Board of Appeals Options:

**Approval:** I move to approve the variances requested by John Rozanski from Articles 3.1.9.E, 5.11.Q.xviii, 5.11.A.iii, 5.11.A.iv, and 5.19.N.i.C of the Zoning Ordinance for Parcel Number 12-13-328-003, identified as 8565 Pontiac Lake Road, in order to construct an apartment building that would encroach 30 feet into the required west side yard setback. Parking setback variances are granted to encroach 30 feet into the required front yard setback, 65 feet into the required west side yard setback, and 16.5 feet into the required east side yard setback. A 2.5-foot variance and 38-foot variance are granted to allow the dumpster enclosure to encroach into the required front yard setback and project in front of the principal building. A variance is granted to waive the installation of curbing. A 30-foot variance from the required lot width is also granted. This approval will have the following conditions:

- The Applicant shall obtain all necessary permits from the White Lake Township Building Department.
- The Applicant shall receive preliminary site plan approval from the Township Board and final site plan approval from the Planning Commission.
- A permit from the Road Commission for Oakland County (RCOC) shall be required for all work within the Pontiac Lake Road right-of-way.
- A permit from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) shall be required for stormwater discharge into the Huron River/wetland.

**Denial:** I move to deny the variances requested by John Rozanski for Parcel Number 12-13-328-003, identified as 8565 Pontiac Lake Road, due to the following reason(s):

**Table:** I move to table the variance requests of John Rozanski for Parcel Number 12-13-328-003, identified as 8565 Pontiac Lake Road, to consider comments stated during this public hearing.

## Attachments:

1. Variance application dated May 20, 2021.
2. Existing conditions plan dated April 26, 2019 (revision date May 12, 2021).
3. Preliminary site plan dated January 30, 2020 (revision date May 12, 2021).
4. Architectural site plan, floor plans, and elevations dated May 20, 2021.

### 7.37 STANDARDS

General variances: The Zoning Board of Appeals may authorize a variance from the strict application of the area or dimensional standard of this Ordinance when the applicant demonstrates all of the following conditions "A - E" or condition F applies.

- A. Practical difficulty: A practical difficulty exists on the subject site (such as exceptional narrowness, shallowness, shape or area; presence of floodplain; exceptional topographic conditions) and strict compliance with the zoning ordinance standards would unreasonably prevent the owner from using of the subject site for a permitted use or would render conformity unnecessarily burdensome. Demonstration of a practical difficulty shall have a bearing on the subject site or use of the subject site, and not to the applicant personally. Economic hardship or optimum profit potential are not considerations for practical difficulty.
- B. Unique situation: The demonstrated practical difficult results from exceptional or extraordinary circumstances or conditions applying to the subject site at the time the Ordinance was adopted or amended which are different than typical properties in the same zoning district or the vicinity.

- C. Not self created: The applicants problem is not self created.
- D. Substantial justice: The variance would provide substantial justice by granting the property rights similar to those enjoyed by the majority of other properties in the vicinity, and other properties in the same zoning district. The decision shall not bestow upon the property special development rights not enjoyed by other properties in the same district, or which might result in substantial adverse impacts on properties in the vicinity (such as the supply of light and air, significant increases in traffic, increased odors, an increase in the danger of fire, or other activities which may endanger the public safety, comfort, morals or welfare).
- E. Minimum variance necessary: The variance shall be the minimum necessary to grant relief created by the practical difficulty.
- F. Compliance with other laws: The variance is the minimum necessary to comply with state or federal laws, including but not necessarily limited to:
- i. The Michigan Right to Farm Act (P.A. 93 of 1981) and the farming activities the Act protects;
  - ii. The Americans with Disabilities Act of 1990 (as amended), and the needs of handicapped individuals the Act protects, including accessory facilities, building additions, building alterations, and site improvements which may not otherwise meet a strict application of the standards of this Ordinance.

Under no circumstances shall the Board of Appeals grant a variance to allow a use not permissible under the terms of this Ordinance in the district involved, or any use expressly or by implication prohibited by the terms of this Ordinance in said district.

11-3-2021

John Rozanski  
2704 Wabum Road  
White Lake, MI. 48386  
President NCM Ventures  
248-231-8529

Re:  
8565 Pontiac Lake Road Overlook Project

Dear Zoning Board of Appeals,  
I'm writing this letter after speaking with Justin on 10-29-21. Justin explained to me that I must request an extension, through the ZBA if I want more time, before I have to pull my building permit. Therefore, I am asking for more time. There are several factors on why I require more time. They are as follows.

I recently received my final site approval last month. Until then I haven't been able to submit my project for pricing. I have sent the plans out to several builders and asked them to expedite the review. At this point, I don't even know if the project is financially feasible. I was told maybe by Thanksgiving or early December I can get some pricing. At this point, all I have are preliminary numbers.

Funding is also going to take time, once I receive numbers and plan on moving forward. Without the funding, I surely won't need the building permit.

Most importantly, I have lease agreements with my current tenants that last through mid-April of 2022. I certainly don't want to pull a permit and give up 4 months of time, before I can even demo.

Finally, my ZBA meeting was in June which puts my 6-month deadline in December. I surely won't be doing any construction this winter. It won't be until the spring or summer of 2022.

Please let me know what I can do. I am asking for a 6 month extension. It's my hope that I can get this project off the ground asap. I just need more time so I don't have to go through this whole process over again.

Respectfully,  
John Rozanski

RECEIVED  
NOV 03 2021  
COMMUNITY  
DEVELOPMENT  
DEPARTMENT

**WHITE LAKE TOWNSHIP  
ZONING BOARD OF APPEALS  
REGULAR VIRTUAL MEETING**  
June 24, 2021

**CALL TO ORDER**

Chairperson Spencer called the meeting to order at 7:00 P.M. She then led the Pledge of Allegiance.

**ROLL CALL**

**Present:**

Kathleen Aseltyne, present in White Lake, MI  
Nik Schillack, present in White Lake, MI  
Debby Dehart- Planning Commission Liaison, present in White Lake, MI  
Jo Spencer- Chairperson, present in White Lake, MI  
Michael Powell, Township Board Liaison, present in Cincinnati, OH

**Absent:**

Dave Walz, Vice Chairperson

**Others:**

Justin Quagliata, Staff Planner  
Hannah Micallef, Recording Secretary

**APPROVAL OF AGENDA**

**MOVED** by Member Schillack, **SUPPORTED** by Member Dehart to approved the agenda as presented. The motion **CARRIED** with a voice vote (5 yes votes).

**APPROVAL OF MINUTES:**

- a. Zoning Board of Appeals Regular Meeting of May 27, 2021

**MOVED** by Member Dehart, **SUPPORTED** by Member Aseltyne to approve the Zoning Board of Appeals Regular Meeting Minutes of May 27, 2021 as presented. The motion **CARRIED** with a voice vote (5 yes votes).

**CONTINUING BUSINESS:**

There was no continuing business.

**NEW BUSINESS:**

- a.     Applicant:     John Rozanski  
                          2704 Wabum Road  
                          White Lake, MI 48386
- Location:    **8565 Pontiac Lake Road**  
                          White Lake, MI 48386 identified as 12-13-328-003
- Request:     The applicant requests to construct an apartment building and associated parking lot, requiring variances from Article 3.1.9.E, RM-2 Multiple Family Residential Side-Yard Setback and Minimum Lot Width. A variance from Article 5.11.A, Off-Street Parking is required due to the parking setbacks. A variance from Article 5.19.N.i.c, Dumpsters and Trash Storage Enclosures is required for the dumpster projection in front of a principal building. A variance from Article 5, Section 11.Q.xviii is required to waive the installation of parking area curbing.

Chairperson Spencer noted for the record that 13 owners within 300 feet were notified. 0 letters were received in favor, 0 letters were received in opposition, and 0 letters were returned undeliverable from the US Postal Service.

Staff Planner Quagliata gave his staff report.

Member Schillack asked staff if the units were reduced from 14 units to 12 units. Staff Planner Quagliata confirmed. Member Schillack asked staff if curbing was added. Staff Planner Quagliata said no. Member Schillack asked staff if landscaping fell into the ZBA's purview. Staff Planner Quagliata said yes, screening was required per the Zoning Ordinance since the property was adjacent to residentially zoned property.

Mr. Brian Howard, architect for the project, was present to speak on behalf of the applicant. He said when he reduced two units from the original plan, he was able to reduce the parking. By reducing the building footprint, he was able to pull it out of the natural features setback. He said more landscaping would be added around the parking area. He said there was no intent to eliminate curbing, and he did not notice it was missing on the plans. Curb and gutter would be installed around the parking lot.

Chairperson Spencer asked staff if the plans showed the screening material for the dumpster. Staff Planner Quagliata said the plans showed an 8' poured concrete or block wall with an 8' metal gate; he added the ordinance did not allow poured concrete walls for dumpster enclosures. Chairperson Spencer asked staff what materials the building would be built with. Staff Planner Quagliata said it would be a combination of brick (vener) and composite siding.

Chairperson Spencer asked Mr. Howard if the dumpster enclosure could be designed to have the same material that the building would have. Mr. Howard said yes, the enclosure could be constructed with brick veneer.

Member Powell asked staff if there was a way to prevent the dumpster gates of being open all day. Staff Planner Quagliata said the only way to ensure that would be a self-closing or electronic gate.

Chairperson Spencer opened the public hearing at 7:36 P.M. Seeing no public comment, she closed the public hearing at 7:36 P.M.

John Rozanski, applicant, was also present. He said he would beautify the dumpster enclosure as much as possible due to the location. He added he planned on isolating the building with landscaping. Mr. Howard said the idea was to soften the building from the parking area, and there would be landscaping lining the walkways.

Staff Planner Quagliata stated any condition regarding landscaping would have to be specific.

Member Dehart asked staff if irrigation was necessary. Staff Planner Quagliata said yes, and an irrigation plan was a requirement for final site plan approval.

Staff Planner Quagliata went through the standards from Article 7, Section 37 from the ClearZoning Ordinance:

A. Practical Difficulty

In regards to side yard setback:

- Member Powell said the site itself had a number of practical difficulties. There were drawbacks in order to make the site conform with its zoning.

In regards to minimum lot width:

- Chairperson Spencer said the lot was not 200' wide

In regards to parking setbacks on the side yards:

- Chairperson Spencer said the applicant reduced the amount of setback variance requested since coming before the ZBA in February.
- Member Dehart said the front parking setback was due to the natural feature setback.
- Member Schillack said it would be better to keep cars away from the river due to potential car oil/car fluid run off into the river.

In regards to the projection and setback of the dumpster enclosure:

- Member Dehart said there was no other place for a dumpster.

B. Unique Situation

- Chairperson Spencer said the lot was nonconforming. Mr. Schillack added the river made the lot unique as well. The ZBA concurred this applied to all requested variances.

C. Not Self-Created

- Member Schillack said the river was an existing feature and not created by the applicant. The ZBA concurred this applied to all requested variances.

D. Substantial Justice

- Member Schillack said allowing the applicant to construct the building would grant him substantial justice. Chairperson Spencer agreed. The ZBA concurred this applied to all requested variances.

E. Minimum Variance Necessary

- Chairperson Spencer said the applicant had been working with Township staff regarding the needed variances and believed these variances were the minimum necessary. Member Schillack agreed. The ZBA concurred this applied to all requested variances.



Staff Planner Quagliata gave his staff report.

Member Schillack asked staff if the side yard setback variance requested was due to wanting to keep a window. Staff Planner Quagliata confirmed.

Member Dehart asked staff what year the house was built. Staff Planner Quagliata said the house was built in 1960.

Mr. Scott Summers, applicant, was present to speak on his case. He spoke with staff in the Planning Department regarding his plans. He wanted to construct the addition to keep consistency with the rest of the house. He originally wanted to build a lake room off the back, but after speaking with staff, he revised the plans to modify the overhang. He said the estimate of the value of work was due to the increase in lumber prices.

Member Schillack asked staff for the proposed roof overhang setback. Staff Planner Quagliata said 5.3'.

Member Aseltyne asked the applicant what the practical difficulty was in his situation. Mr. Summers said the property was oddly shaped and on an angle.

Chairperson Spencer opened the public hearing at 8:50 P.M. Seeing no public comment, she closed the public hearing at 8:51 P.M.

Staff Planner Quagliata went through the standards from Article 7, Section 37 from the ClearZoning Ordinance:

- A. Practical Difficulty
  - Member Powell said the shape of the lot was not in the applicant's control, and he appreciated the addition being jogged to lessen the variance needed.
- B. Unique Situation
  - Member Schillack said the house was built in 1960s, and the standards had changed since.
- C. Not Self-Created
  - Chairperson Spencer said the applicant did not build the house and bought it as it was.
- D. Substantial Justice
  - Member Schillack said the addition would not block neighbor's views.
- E. Minimum Variances Necessary
  - Chairperson Spencer said the applicant chose to jog the addition and not put it directly on the footpath.

**Member Aseltyne MOVED to approve the variances requested by Scott Summers from Article 3.1.5.E and Article 7.28.A of the Zoning Ordinance for Parcel Number 12-28-102-003, identified as 7032 Biscayne Avenue, in order to construct an addition that would encroach 3.4 feet into the required east side yard setback and exceed the allowed value of improvements to a nonconforming structure by 193%. An 18.3-foot variance from the required lot width is also granted from Article 3.1.5.E. This approval will have the following conditions:**



- **The Applicant shall obtain all necessary permits from the White Lake Township Building Department.**
- **An as-built survey shall be required to verify the roof overhang setback from the east side lot line.**
- **The plans shall be revised for consistency to clarify the roof overhang setback.**

**Member Dehart SECONDED, and the motion carried with a roll call vote (5 yes votes):  
(Aseltyne/yes, Dehart/yes, Schillack/yes, Powell/yes, Spencer/yes)**

- c. Applicant: David Nemshick  
9323 Gale Road  
White Lake, MI 48386
- Location: **9323 Gale Road**  
White Lake, MI 48386 identified as 12-11-451-019
- Request: The applicant requests to construct an addition to a single-family house, requiring variances from Article 3.1.6.E, R1-D Single Family Residential Side-Yard Setback, Front-Yard Setback, and Minimum Lot Width. A variance from Article 7.28.A, Repairs and Maintenance to Nonconforming Structures will be required due to both the value of improvements and the increase in cubic content.

Chairperson Spencer noted for the record that 19 owners within 300 feet were notified. 0 letters were received in favor, 0 letters were received in opposition, and 0 letters were returned undeliverable from the US Postal Service.

Staff Planner Quagliata gave his staff report.

Member Powell asked staff if the floorplan for the existing structure was submitted. Staff Planner Quagliata said renderings were submitted, but not floor plans. The existing house had two bedrooms, and the addition would contain two more, bringing the total bedrooms after the addition to four.

Member Schillack asked staff if the value of the project was determined after the project was complete. Staff Planner Quagliata said applicants were required to give an estimate to the value of the work being done, as that was how building permit fees were determined. The International Code Council, based on current construction costs, estimated the value of the addition at \$169,000.

Member Aseltyne asked staff what the percentage over SEV the proposed value of work would be. Staff Planner Quagliata said it would be 860%.

Mr. Nemschick, the applicant, was present to speak on his case. He said he requested a 3' variance to allow for a large distance or fire lane on the east side of the house. He would also be able to add a third bay on the east side. He said he would sign paperwork to certify the living space over the garage would not be used as a second dwelling. He said the addition would be connected to the current house, and not separated from the existing structure.

Member Powell asked the applicant how the proposed bedrooms in the addition would be used. Mr. Nemschick said one of the existing bedrooms would be eliminated and made into an office, and the other could be eliminated to widen the living room area. The new bedrooms would be made into a master bedroom and a potential nursery.

Member Aseltyne asked the applicant why he didn't want to demolish the current house since the addition was the size of a new house. Mr. Nemschick said it would be inconvenient to tear the entire house down during this time, and he worked from home.

Member Powell stated the applicant could have torn down the existing house and build a new house that would not require variances. The variances, if granted, would run with the land. Mr. Nemschick said his lot was 70' wide and he wanted the requested variances for the side yard for neighbors and himself to get access to the area behind the back of the house.

Member Dehart said if the house was centered on the lot, there would be room on the east side, and lessen the variances requested. Mr. Nemschick said without the garage, there would be 21'.

Chairperson Spencer opened the public hearing at 9:29 P.M. Seeing no public comment, she closed the public hearing at 9:29 P.M.

Staff Planner Quagliata went through the standards from Article 7, Section 37 from the ClearZoning Ordinance:

- A. Practical Difficulty
  - Member Powell did not see a practical difficulty. A garage could be constructed closer to the existing structure, and there could be architectural changes to lessen the variances needed. Chairperson Spencer and Member Aseltyne agreed.
  - Member Dehart said the lot was nonconforming. Member Schillack agreed, and saw the practical difficulty regarding the SEV as well.
- B. Unique Situation
  - Chairperson Spencer said the lot had room to shift the house.
- C. Not Self-Created
- D. Substantial Justice
- E. Minimum Variance Necessary

**Member Dehart MOVED to approve the variances requested by David Nemshick from Article 3.1.6.E and Article 7.28.A of the Zoning Ordinance for Parcel Number 12-11-451-019, identified as 9323 Gale Road, in order to construct an addition that would encroach 3 feet into the required west side yard setback and 12.6 feet into the required front yard setback, and exceed the allowed value of improvements to a nonconforming structure by 860%. A 10-foot variance from the required lot width is also granted from Article 3.1.6.E. This approval will have the following conditions:**

- **The Oakland County Health Division shall certify the on-site water system is properly designed to handle the anticipated additional load prior to issuance of a building permit.**
- **The addition plans shall be reviewed by the Township's Department of Public Services prior to issuance of a building permit.**

- **The Applicant shall obtain all necessary permits from the White Lake Township Building Department.**
- **The principal dwelling unit shall be owner-occupied and the addition shall not be rented separately from the principal dwelling unit.**
- **This approval shall not be interpreted to permit creation of a for-rent apartment, or the conversion of the existing single-family unit into a duplex or the like.**
- **The second-story addition shall not exceed 550 square feet in size.**
- **The second-story addition shall not include more than one (1) bedroom.**
- **The addition shall not exceed the maximum building height of the R1-D zoning district. Architectural plans, drawn to scale, shall be submitted at the time of reapplication for a building permit.**
- **Access to the addition shall be provided from the enclosed connection on the north side of the house. Any other exterior entrance to the addition shall be prohibited.**
- **Exterior alteration/renovation shall not change the overall single-family character of the dwelling unit or the surrounding neighborhood, as determined by the Planning Department.**
- **Prior to issuance of a building permit, the Applicant shall submit a revised floor plan for the addition, which shall be subject to the approval of the Planning Department.**
- **No new street address shall be assigned to the addition.**
- **All utility connections and services shall be shared between the principal dwelling unit and addition. No new meters (electric, gas, or otherwise) shall be installed to serve the addition.**
- **The addition shall not have its own cooking facilities.**
- **Prior to issuance of a building permit, an agreement shall be prepared by the Township Attorney, to be signed by the Applicant and recorded with the Oakland County Register of Deeds, stating the addition shall not be used as a secondary dwelling unit. The agreement shall be binding on the Applicant and all future owners of the property. The Applicant shall be billed the cost of the Township Attorney's fees to draft the agreement.**
- **Any future enlargement or alteration of the addition shall require approval of the Zoning Board of Appeals.**

**Member Dehart asked to amend the motion to alter condition number four to be: the addition shall not be rented separately from the principal dwelling unit.**

**SUPPORTED by Member Aseltyne, and the motion FAILED with a roll call vote (4 no votes):  
(Dehart/yes, Aseltyne/no, Schillack/no, Powell/no, Spencer/no)**

**Member Aseltyne MOVED to deny the variances requested by David Nemshick for Parcel Number 12-11-451-019, identified as 9323 Gale Road, due to the following reason(s):**

**Failure to meet the variance standards outlined in Article 7, Section 37 of the ClearZoning Ordinance.**

**Member Powell SUPPORTED, and the motion CARRIED with a roll call vote (4 yes votes):  
(Aseltyne/yes, Powell/yes, Dehart/no, Schillack/yes, Spencer/yes)**

The ZBA recessed at 10:05 P.M. The ZBA returned from recess at 10:11 P.M.

- d.      Applicant:      Todd Hammerick  
   26204 Barrington Circle  
   Commerce, MI 48390
- Location:      **8414 Cascade Street**  
   White Lake, MI 48386 identified as 12-36-453-012
- Request:      The applicant requests to construct a single-family house, requiring  
   variances from Article 3.1.6.E, R1-D Single Family Residential Front-Yard  
   Setback, Side-Yard Setback, Lot Coverage, Minimum Lot Area, and  
   Minimum Lot Width.

Chairperson Spencer noted for the record that 30 owners within 300 feet were notified. 0 letters were received in favor, 0 letters were received in opposition, and 0 letters were returned undeliverable from the US Postal Service.

Staff Planner Quagliata gave his staff report.

Member Schillack asked staff how close the neighboring house to the west was to the applicant's property. Staff Planner Quagliata said 3.8'. Member Schillack said there was a tree on the west side yard property line.

Member Aselyne asked staff if the house were smaller, would it be in conformance. Staff Planner Quagliata said in order to comply with the side yard setbacks, the house could only be 20' wide.

Ghassan Abdelnour, 24001 Orchard Lake, Farmington, MI, architect, was present to speak on behalf of the applicant. He was the architect for the previous homeowner when this request was brought in front of the ZBA in October, 2020.

Todd Hammerick, applicant, was present to speak on his case. He said he spoke to his neighbor and the fence on the west would be taken down.

Member Powell asked Mr. Abdelnour where the HVAC system would be placed. Mr. Abdelnour said the HVAC would be in the rear of the house and hidden. Member Powell asked Mr. Abdelnour how gutter drainage would be dealt with. Mr. Abdelnour said a gutter system would be installed. Mr. Powell asked Mr. Abdelnour if adding the dormer created a building height problem. Mr. Abdelnour said no, and Mr. Hammerick said the dormer would be extended laterally, not vertically.

Chairperson Spencer opened the public hearing at 10:30 P.M. Seeing no public comment, she closed the public hearing at 10:30 P.M.

Staff Planner Quagliata went through the standards from Article 7, Article 37, from the ClearZoning Ordinance:

- A. Practical Difficulty
  - Chairperson Spencer said the lot was a practical difficulty. Members Dehart and Schillack agreed.
- B. Unique Situation
  - Member Dehart said the lot size posed a unique situation.

- C. Not Self-Created
  - Chairperson Spencer said the applicant did not have anything to do with the shape of the lot.
- D. Substantial Justice
  - Member Schillack said most of the surrounding houses had similar view lines.
- E. Minimum Variance Necessary
  - Chairperson Spencer said the applicant was requesting the minimum, as a 20' wide house would not be feasible.

**Member Schillack MOVED to approve the variances requested by Todd Hammerick from Article 3.1.6.E of the Zoning Ordinance for Parcel Number 12-36-453-012, identified as 8414 Cascade Street, in order to construct a new house that would exceed the allowed lot coverage by 26.86%, encroach 10 feet into the required front yard setback, and 5 feet into the required side yard setback from both the east and west property lines. This approval will have the following conditions:**

- **The Applicant shall obtain all necessary permits from the White Lake Township Building Department.**
- **A foundation certificate shall be required prior to the backfill inspection by the Building Department.**
- **In no event shall the projection of the roof overhang be closer than five (5) feet to the east and west side lot lines, including the gutters.**
- **No mechanical units, including HVAC system or generator, shall be placed closer than five (5) feet to any side yard property line.**
- **All roof drainage will be picked up in downspouts and pipes to eliminate surface drainage down the property line from the home.**

**Member Powell SUPPORTED, and the motion CARRIED with a roll call vote (5 yes votes):  
(Schillack/yes, Powell/yes, Spencer/yes, Dehart/yes, Aseltyne/yes)**

**OTHER BUSINESS**  
No other business.

**ADJOURNMENT**  
**MOVED by Member Aseltyne, SUPPORTED by Member Schillack to adjourn the meeting at 10:41 P.M.**  
**The motion CARRIED with a voice vote (5 yes votes).**

**NEXT MEETING DATE:** July 22, 2021 Regular Meeting

# WHITE LAKE TOWNSHIP ZONING BOARD OF APPEALS

## REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

**TO:** Zoning Board of Appeals  
**FROM:** Justin Quagliata, Staff Planner  
**DATE:** December 9, 2021

---

**Agenda item:** 7d

**Appeal Date:** December 9, 2021

**Applicant:** 4 Corners Square LLC – Shakir W. Alkhafaji

**Address:** 29580 Northwestern Hwy STE 100  
Southfield, MI 48034

**Zoning:** NMU Neighborhood Mixed Use

**Location:** 1449 Union Lake Road  
White Lake, MI 48386

### **Property Description**

The approximately 0.714-acre (excluding road right-of-way) parcel identified as 1449 Union Lake Road is located on the east side of Union Lake Road, north of Cooley Lake Road, and zoned NMU (Neighborhood Mixed Use).

### **Applicant's Proposal**

4 Corners Square LLC, the applicant, is proposing to construct a three-tenant commercial building and associated parking, and install an additional wall sign.

### **Planner's Report**

The requested variances are listed in the following table.

<b>Variance #</b>	<b>Ordinance Section</b>	<b>Subject</b>	<b>Standard</b>	<b>Requested Variance</b>	<b>Result</b>
1	Article 3.1.13.D	Build-to-line coverage	60%	60%	0%
2	Article 3.1.13.D	Minimum building height	2 stories, 25 feet	1 story, 2'-11"	1 story, 22'-1"
3	Article 5.11.P.i	Off-street loading requirements	10 feet by 50 feet	19 feet (length)	31 feet (length)
4	Article 5.9.J.ii.b	Maximum number of signs	0 wall signs	1 wall sign (east facade)	1 wall sign

The variances are being processed concurrently with the preliminary and final site plan requests. The staff report for the site plan (attached) should be referenced for a more complete overview of the project. At its December 2, 2021 meeting the Planning Commission recommended approval of the preliminary site plan to the Township Board, with conditions, including the applicant receiving approval from the Zoning Board of Appeals.

Variance #1: In the NMU zoning district, a building must occupy 60 percent of the front build-to-line of a site, which is defined as its front right-of-way line. For Board members unfamiliar with this concept, a build-to-line is the building line to which a building must be constructed. Generally, a build-to-line is the opposite of a setback; however, similar to setback, a build-to line runs parallel to the right-of-way and is established to create a generally consistent building line along a street. The build-to line designates the specific location or range within which the front building line must be located.

Four Corners Square was not developed in this manner, and a variance from this requirement for the already constructed portion of the project was granted by the Zoning Board of Appeals on March 23, 2017, reducing the 60 percent requirement to 0 percent. The layout of the development is consistent with the variance granted. As the proposed building would utilize traditional setbacks, a variance from this standard is required.

Variance #2: The NMU district requires a minimum building height of two stories, 25 feet, with a maximum height of three stories, 40 feet. A first floor must be at least 14 feet in height, and upper floors are required to be at least 10 feet in height. The previously constructed retail center and Taco Bell are one-story buildings, and a variance from the minimum height standard of the district was granted by the Zoning Board of Appeals on March 23, 2017. The proposed building is one-story and 22'-1" in height. A variance from the minimum building height standard is required.

Variance #3: The zoning ordinance requires one loading space for a development of this size. Such loading and unloading space must be an area 10 feet by 50 feet, with a 15-foot height clearance. The proposed loading area is located at the rear (north side) of the building. A 15-foot height clearance note is shown on Sheet C3 of the site plan. The applicant must clarify the size of the loading area; Sheet C3 of the site plan indicates the area is 31.3 feet by 17.8 feet and Sheet C4 indicates the area is 31 feet by 17 feet. A 19-foot variance from the required loading space length is requested.

*Signs*

Variance #4: A variance was granted by the Zoning Board of Appeals in 2017 to permit nonresidential signs at Four Corners Square in accordance with the RB (Restricted Business) district standards. One wall sign is permitted per tenant; total sign area per tenant cannot exceed 10 percent of the front facade for the individual tenant space. The submitted building elevations show one wall sign per tenant on the front (south) facade of the building. A wall sign is shown on the west elevation, which would be permitted up to one-half the size of the primary sign for the westerly tenant since the building contains frontage on Union Lake Road. A wall sign is shown on the east elevation, which is not permitted. Therefore, a variance is required to allow a wall sign on the east elevation of the building.

The site plan shows an unidentified object at the southwest corner of the site. Staff believes the symbol likely depicts the location of a sign. The applicant must specify if this is the proposed location for the "Welcome to White Lake" sign and revise the plans to label accordingly.

**Zoning Board of Appeals Options:**

**Approval:** I move to approve the variances requested by 4 Corners Square LLC from Article 3.1.13.D, Article 5.11.P.i, and Article 5.9.J.ii.b of the Zoning Ordinance for Parcel Number 12-36-476-032, identified as 1449 Union Lake Road, in order to allow construction of a one-story, 22'-11" tall building with a zero (0) percent build-to-line, a 19-foot variance from the required loading space length, and a variance to allow one wall sign on the east elevation of the building. This approval will have the following conditions:



- The Applicant shall obtain all necessary permits from the White Lake Township Building Department.
- The Applicant shall receive preliminary site plan approval from the Township Board.
- For the purpose of administering the sign ordinance, signs on the subject property shall be treated as those in the RB (Restricted Business) zoning district and meet the requirements of Article 5, Section 9.J of the zoning ordinance.
- No additional signage shall be permitted on the building or site, except for the Township's "Welcome to White Lake" sign.
- Any future modification to signage on the building or site, except for eliminating signage, shall require approval of the Zoning Board of Appeals.

**Denial:** I move to deny the variances requested by 4 Corners Square LLC for Parcel Number 12-36-476-032, identified as 1449 Union Lake Road, due to the following reason(s):

**Table:** I move to table the variance requests of 4 Corners Square LLC for Parcel Number 12-36-476-032, identified as 1449 Union Lake Road, to consider comments stated during this public hearing.

**Attachments:**

1. Staff report to the Planning Commission dated November 19, 2021.
2. Variance application dated November 5, 2021.
3. Site plan dated August 25, 2021 (revision date November 8, 2021).
4. Architectural plans dated October 21, 2021.

7.37 STANDARDS

General variances: The Zoning Board of Appeals may authorize a variance from the strict application of the area or dimensional standard of this Ordinance when the applicant demonstrates all of the following conditions "A - E" or condition F applies.

- A. Practical difficulty: A practical difficulty exists on the subject site (such as exceptional narrowness, shallowness, shape or area; presence of floodplain; exceptional topographic conditions) and strict compliance with the zoning ordinance standards would unreasonably prevent the owner from using of the subject site for a permitted use or would render conformity unnecessarily burdensome. Demonstration of a practical difficulty shall have a bearing on the subject site or use of the subject site, and not to the applicant personally. Economic hardship or optimum profit potential are not considerations for practical difficulty.
- B. Unique situation: The demonstrated practical difficult results from exceptional or extraordinary circumstances or conditions applying to the subject site at the time the Ordinance was adopted or amended which are different than typical properties in the same zoning district or the vicinity.

- C. Not self created: The applicants problem is not self created.
- D. Substantial justice: The variance would provide substantial justice by granting the property rights similar to those enjoyed by the majority of other properties in the vicinity, and other properties in the same zoning district. The decision shall not bestow upon the property special development rights not enjoyed by other properties in the same district, or which might result in substantial adverse impacts on properties in the vicinity (such as the supply of light and air, significant increases in traffic, increased odors, an increase in the danger of fire, or other activities which may endanger the public safety, comfort, morals or welfare).
- E. Minimum variance necessary: The variance shall be the minimum necessary to grant relief created by the practical difficulty.
- F. Compliance with other laws: The variance is the minimum necessary to comply with state or federal laws, including but not necessarily limited to:
  - i. The Michigan Right to Farm Act (P.A. 93 of 1981) and the farming activities the Act protects;
  - ii. The Americans with Disabilities Act of 1990 (as amended), and the needs of handicapped individuals the Act protects, including accessory facilities, building additions, building alterations, and site improvements which may not otherwise meet a strict application of the standards of this Ordinance.

Under no circumstances shall the Board of Appeals grant a variance to allow a use not permissible under the terms of this Ordinance in the district involved, or any use expressly or by implication prohibited by the terms of this Ordinance in said district.

# WHITE LAKE TOWNSHIP PLANNING COMMISSION

## REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

**TO:** Planning Commission

**FROM:** Sean O'Neil, AICP, Planning Director  
Justin Quagliata, Staff Planner

**DATE:** November 19, 2021

**RE:** Four Corners Square – Retail Center #2  
Preliminary and Final Site Plan – Review #2

---

Staff reviewed the revised site plan prepared by Nowak & Fraus Engineers dated August 25, 2021 (revision date November 8, 2021). The following comments from the first review letter dated November 4, 2021 are listed below. Responses to those comments are provided in **(red)**.

Veritas (Shakir W. Alkhafaji) has requested site plan approval to construct a retail center at 1449 Union Lake Road (Parcel Number 12-36-476-032), located on the east side of Union Lake Road, north of Cooley Lake Road. The approximate 0.714 acre (excluding road right-of-way) subject site is zoned NMU (Neighborhood Mixed Use) and contains 201.61 feet of total frontage on Cooley Lake Road and 220 feet of total frontage on Union Lake Road. A parking area and landscaping are located on the site.

The subject parcel is part of the Four Corners Square development, which consists of three other parcels containing an 81-unit, three-story apartment building with underground parking, 9,375 square foot five-tenant retail building with a drive-thru restaurant (Tim Hortons), and 2,139 square foot Taco Bell drive-thru restaurant. At its meeting on August 3, 2017 the Planning Commission approved the final site plan for the already constructed portion of the development. On May 4, 2017 the Planning Commission granted special land use approval for the Taco Bell and Tim Hortons drive-thrus, with conditions. At the same meeting, the Planning Commission also granted special land use approval for outdoor seating at Taco Bell, the retail plaza, and “the future restaurant pad.” At its meeting on March 23, 2017 the Zoning Board of Appeals approved variances required for the already constructed portion of the project.

The final site plan approved by the Planning Commission showed a proposed 3,600 square foot full-service restaurant building with a 1,200 square foot patio on the subject property. The proposed one-story, three-tenant retail center would contain 4,169 square feet. **The note stating 3,893 square feet of gross floor area on Sheet A.001 of the site plan (architectural plans) shall be revised to correctly indicate 4,169 square feet of gross floor area. (Comment outstanding. Revised architectural plans were not provided).** The submitted plans show Beyond Juice is intended to occupy the westerly tenant space and Detroit Wings is intended to occupy the easterly tenant space. A prospective tenant for the middle unit has not been identified.

### Master Plan

The Future Land Use Map from the Master Plan designates the subject site in the Planned Community category, and the property is located in the Four Towns Focus Area. Retail, dining, and personal service establishments are typical commercial uses within Planned Community. The Master Plan envisions the Four Towns area as a mixed-use core of activity for retail and residential utilizing pedestrian-oriented design. This Focus Area encourages ground floor retail and office with upper floor residential. The Master Plan states a corner feature at Union Lake Road and Cooley Lake Road is desired to define the area. At the March 23, 2017 Zoning Board of Appeals meeting, the applicant’s representative at the time stated the “Welcome to White Lake” sign would be relocated to the corner of the property. The sign has not been relocated; any relocation of the sign would require approval by the Township.

### FUTURE LAND USE MAP

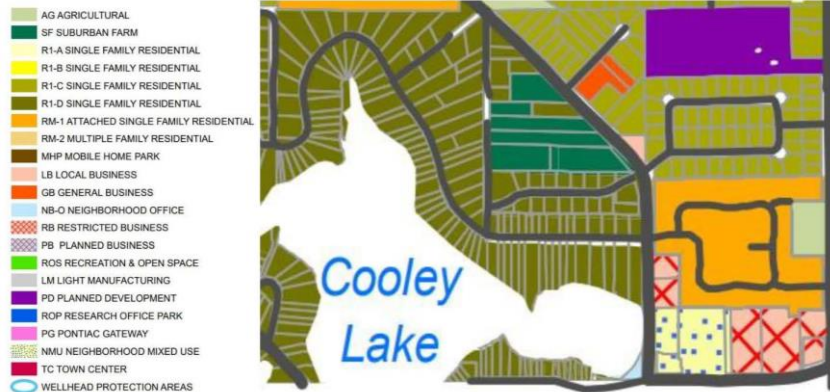


### Zoning

At its meeting on October 18, 2016 the Township Board approved rezoning the parcels within the Four Corners Square development from Restricted Business (RB) to NMU (Neighborhood Mixed Use), which requires a minimum lot area of 5,000 square feet. There is not a minimum lot width requirement in the NMU district.

The parcels within Four Corners Square are the only properties in the Township zoned NMU. The intent of the NMU district is to create small centers of neighborhood life which encourage a mix of compatible retail, service, office, and residential uses in a walkable environment.

### ZONING MAP



### Physical Features

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wetland Map and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map indicate neither wetlands nor floodplain are present on or near the site. Currently landscaping and parking associated with Four Corners Square occupies the site. American & Import, a vehicle service and repair facility, formerly occupied the site. Precipitated by a request for a Rehabilitation Exemption Certificate, the Township Board created a Commercial Rehabilitation District in 2016. Plumes of contamination were present and posed a potential adverse impact to water in the vicinity. After establishing the district, in 2018 the Township received a \$250,000 grant from the Michigan Economic Development Corporation (MEDC) to assist in funding the clean-up of the contaminated area. In 2019, the Township and the developer signed an agreement to transfer the grant funds to the developer to reimburse incurred costs associated with the remediation activities on the property.

In 2016 the Township Board approved the developer’s Commercial Rehabilitation Exemption Certificate application for Four Corners Square. The seven-year tax abatement ends December 30, 2023. At its meeting on October 19, 2021 the Township Board approved a three-year extension of the tax abatement for only the subject parcel, with an ending date of December 30, 2026. This addition of three years allows the exemption for the maximum total of 10 years. The proportioned frozen taxable value on the certificate for the subject parcel is \$44,119.

### Access

The retail center would be accessed from existing driveways on Wadi Boulevard (private drive) and Cooley Lake Road (this driveway is right-out only and serves the existing Four Corners Square retail center). **The applicant will be required to dedicate (if not already completed) the additional portion of the future right-of-way at the east side of Union Lake Road to the Road Commission for Oakland County (RCOC).** (Comment remains as a notation).

An existing eight-foot-wide pathway along Union Lake Road and six-foot-wide pathway along Cooley Lake Road border the property frontages. Internal sidewalks are five-feet-wide at the rear (north) and along the east side of the building. Along the front (south side) of the building, a seven-foot-wide sidewalk is shown on the plans. **The note stating “Pr. 4” concrete sidewalk (TYP)” on Sheet C3 of the site plan appears to be an error and shall be revised to correctly indicate a seven-foot-wide concrete sidewalk (noted on Sheet C4 of the site plan).** (Comment addressed. A note has been added to Sheet C3 indicating a seven-foot-wide sidewalk is proposed).

### Utilities

Municipal water and sanitary sewer are available to serve the retail center. Utilities are located on the Four Corners Square property since installation to serve the already constructed portion of the development. The Township Engineering Consultant will perform an analysis of stormwater, utilities, and grading to ensure compliance with all applicable ordinances as well as the Township Engineering Design Standards.

### Staff Analysis

The development standards for the NMU district allow for zero-foot front and side yard building setbacks, and a five-foot setback from a service drive located at the rear of the site. The ordinance also requires a building to occupy 60 percent of the front build-to-line of a site, which is defined as its front right-of-way line. Four Corners Square was not developed in this manner, and a variance from this requirement for the already constructed portion of the project was granted by the Zoning Board of Appeals on March 23, 2017, reducing the 60 percent requirement to 0 percent. The layout of the development is consistent with the variance granted. As the building would utilize traditional setbacks, **a variance from this standard is required to construct the proposed retail center.** (Comment outstanding; however, the applicant has filed a variance application and a public hearing is scheduled at the December 9, 2021 Zoning Board of Appeals meeting).

The NMU district requires a minimum building height of two stories, 25 feet, with a maximum height of three stories, 40 feet. A first floor must be at least 14 feet in height, and upper floors are required to be at least 10 feet in height. The previously constructed retail center and Taco Bell are one-story buildings, and a variance from the minimum height standard of the district was granted by the Zoning Board of Appeals on March 23, 2017. The proposed building is one-story and 22’-1” in height. **A variance from the minimum building height standard is required to construct the proposed retail center.** (Comment outstanding; however, the applicant has filed a variance application and a public hearing is scheduled at the December 9, 2021 Zoning Board of Appeals meeting).

### *Building Architecture and Design*

Generally, exterior building materials should be composed primarily of high quality, durable, low maintenance material, such as masonry, stone, brick, glass, or equivalent materials. Buildings should be completed on all sides with acceptable materials. In the NMU district, the design of buildings should relate to and blend with the facades of adjacent buildings and complement streetscape improvements in the area. The proposed building materials for the project are a mix of light and dark four-inch brick veneer, and pre-finished burnished CMU (concrete masonry unit) veneer with a cast stone veneer accent band three feet up around the base of the building. **The Material Legend on Sheet A.202 of the architectural plans shall be revised to relabel the CMU improperly identified as split face; burnished block is proposed. (Comment outstanding. Revised architectural plans were not provided).** The dark brick veneer would wrap around the upper 3.5 feet of the building. Pre-finished metal (aluminum) coping would be located on top of the walls around the building. **The address (street number) location shall be shown on the building. Six-inch-tall numbers visible from the street shall be required. The address location is subject to approval of the Township Fire Marshall. (Comment outstanding. Revised architectural plans were not provided).** Two, 4'-4" tall, 25' wide steel trellises are proposed 34 feet apart on the roof of the building, fronting on the south elevation. Pre-finished metal (aluminum) canopies would be located on the front (south) and both sides of the building, using tension rods with turnbuckles anchored to wall plates to attach to the building. The light color brick veneer with a cast stone sill is proposed to cover the 6'-4" retaining wall below the patio.

While elevations of the building were submitted showing the different building materials for the project, finalized colors were not noted on the elevations. Staff requested a sample board of building materials to be displayed at the Planning Commission meeting. Elevations in color are also required by the ordinance and were not submitted. The applicant stated these items were not provided because the proposed materials match the existing retail building (light and dark gray materials). **The Planning Commission should require these items to be submitted. (Comment outstanding. The Planning Commission may require these items be provided).**

The outdoor patio is 12-feet-wide, approximately 660 square feet in size, and located on the west side of the building. **It appears the western portion of the patio is located within an existing 33-foot-wide sanitary sewer easement. The Planning Department defers to the Director of Public Services and Township Engineering Consultant on this matter. (Comment outstanding. The response letter provided to the first review indicates the applicant would provide a letter to the effect the applicant would be responsible for removal and replacement of the proposed patio if removal was necessary for sanitary sewer maintenance/repair. Approval of the Director of Public Services is required to allow the patio to encroach on the existing sanitary sewer easement).**

Accessory items such as railings, benches, trash receptacles, outdoor seating (such as tables and chairs), or sidewalk planters located in the vicinity of sidewalks and/or outdoor seating areas are required to be of commercial quality and complement the building design and style. The submitted architectural plans show a 3.5-inch decorative cast iron guard rail with posts surrounding the patio. **Details were not provided for the proposed concrete steps with handrails to the Union Lake Road sidewalk or the materials of items to be located on the patio; such details shall be provided for Planning Commission review and approval. Details shall also be provided for the patio surfacing; an ornamental paving treatment should be required by the Planning Commission.** (Comment partially addressed. Stair details have been added to the landscape plan. However, the handrail detail shall be updated to specify the proposed color. The Township Engineering Consultant shall provide comment on the stairs' accessibility and compliance with the Americans and Disabilities Act. Furthermore, details were not provided for the items to be located on the patio, nor were details provided for the patio surfacing. Revised architectural plans were not provided). The paving treatment should be something either decorative or something to provide aesthetic quality to the patio. Potential options for ornamental paving treatments include, but are not limited to, CMU pavers; brick; stone; or stamped, stained, and sealed concrete.

### *Parking*

The parking layout for this site was approved with the site plan for the already constructed portion of Four Corners Square. Parking calculations for the previously proposed full-service restaurant and patio indicated 80 spaces were required. In 2017 the Zoning Board of Appeals granted an 11-space variance to allow 69 parking spaces to serve the subject site. 42 of the 69 spaces are located on the subject site; the remaining 27 spaces are located on the adjoining property to the east. Two barrier-free parking spaces are shown along the front of the building. A barrier-free parking sign detail is provided on Sheet C3 of the site plan. **A “Van Accessible” sign detail shall also be provided on Sheet C3 of the site plan.** (Comment partially addressed. While the response letter provided to the first review indicates a van accessible sign detail was added to Sheet C3, a boxed area was added to the previously supplied barrier free parking sign detail with a note stating a sign indicating “van accessibility” shall be provided. The requested “Van Accessible” sign detail was not provided).



### *Off-Street Loading Requirements*

The zoning ordinance requires one loading space for a development of this size. Such loading and unloading space must be an area 10 feet by 50 feet, with a 15-foot height clearance. The proposed loading area is located at the rear (north side) of the building and 10 feet by 40 feet; **therefore, a 10-foot variance from the required loading space length shall be required. Also, a note shall be added to the site plan indicating there will be a 15-foot height clearance for the loading space. As a condition of site plan approval, the proposed screen wall on the north and west sides of the loading area shall match the same brick veneer as the facade of the building. A wall detail shall be provided on Sheet C3 of the site plan to show a four-inch brick face on the outside walls of the enclosure.** (Comment partially addressed. The applicant has filed a variance application and a public hearing is scheduled at the December 9, 2021 Zoning Board of Appeals meeting. The dumpster enclosure was relocated to the west end of the loading area. However, the applicant shall clarify the size of the loading area; Sheet C3 indicates the area is 31.3 feet by 17.8 feet and Sheet C4 indicates the area is 31 feet by 17 feet. The plans shall be revised for consistency. A 15-foot height clearance note has been added to Sheet C3, and the dumpster enclosure detail was revised on Sheet C8 to note brick veneer would be utilized on the outside walls).

### *Trash Receptacle Screening*

The zoning ordinance requires dumpsters to be surrounded by a six-foot-tall wall on three sides and an obscuring wood gate on a steel frame on the fourth side, located on a six-inch concrete pad extending 10 feet in front of the gate, with six-inch concrete-filled steel bollards to protect the rear wall and gates. The proposed enclosure is located at the rear (north side) of the building. A six-foot-tall concrete screen wall is proposed around three sides of the dumpster enclosure, with a steel backed wood gate on the east side of the structure. The zoning ordinance states dumpsters and trash storage enclosures shall be constructed of the same decorative masonry materials as the buildings to which they are accessory. Brickform concrete (simulated brick pattern) or stained, decorative CMU block are not permitted where the principal building contains masonry. Plain CMU block is also prohibited. **As a condition of site plan approval, the dumpster enclosure shall match the same brick veneer as the facade of the building with a steel backed wood gate painted a complementary color to the brick veneer. The dumpster enclosure detail on Sheet C7 of the site plan shall be revised to show a four-inch brick face on the outside walls of the concrete enclosure and indicate the color of the gate.** (Comment partially addressed. The dumpster enclosure detail was revised on Sheet C8 to note brick veneer would be utilized on the outside walls. While the plan notes the gate would be painted a complimentary color to the brick veneer, the color was not indicated as requested).

### *Landscaping and Screening*

The landscape layout for this site was approved with the site plan for the already constructed portion of Four Corners Square. Variances were granted by the Zoning Board of Appeals in 2017 to reduce the required greenbelt for nonresidential parking areas abutting road right-of-way. A condition of such approval allowed the Planning Commission to retain the authority to require a 30-inch screen wall in conjunction with a five-foot greenbelt. A landscape plan was submitted showing the relocation of some of the existing plant material to screen the proposed transformer, dumpster enclosure, and loading area. **If any plant materials required by site plan approval dies or becomes diseased during construction or from transplanting, the applicant shall be required to replace the plant materials. Additionally, all lawn areas shall be sodded. All applicable notes on the landscape plan, including the General Landscape Notes and General Seed Note, shall be revised accordingly to indicate the required installation of sod in lawn areas.** (Comment addressed. The General Seed Note was replaced with a General Sod Note. Also, five trees planted as part of the original approval are proposed to be transplanted. The Plant Material Note indicates all existing plant material on-site shall be transplanted as shown or elsewhere on-site at the direction of the applicant. Any and all transplant locations, as well as a stockpile location, shall receive prior review and approval by the Township). The landscape plan notes five Spruce trees would be transplanted on-site at the direction of the owner. **The landscape plan shall be revised to show where the five transplanted Spruce trees are proposed to be relocated.** (Comment addressed. A note has been added to the landscape plan stating the Spruce trees were temporary landscape screening installed as a part of the original approval and would be removed to facilitate construction).

### *Signs*

A variance was granted by the Zoning Board of Appeals in 2017 to permit nonresidential signs at Four Corners Square in accordance with the RB (Restricted Business) district standards. One wall sign is permitted per tenant; total sign area per tenant cannot exceed 10 percent of the front facade for the individual tenant space. The submitted building elevations show one wall sign per tenant on the front (south) facade of the building. A wall sign is shown on the west elevation, which would be permitted up to one-half the size of the primary sign for the westerly tenant since the building contains frontage on Union Lake Road. **A wall sign is shown on the east elevation, which is not permitted and shall be removed from the plan.** (Comment outstanding. Revised architectural plans were not provided. However, the applicant has filed a variance application and a public hearing is scheduled at the December 9, 2021 Zoning Board of Appeals meeting).

**The site plan shows an unidentified object at the southwest corner of the site; this shall be labeled. Staff believes the symbol likely depicts the location of a sign. The applicant shall specify if this is the proposed location for the “Welcome to White Lake” sign.** Comment outstanding. The response letter provided to the first review indicates the object appears to be the “Welcome to White Lake” sign. The applicant shall confirm and the plans revised to label accordingly).

### *Lighting*

The applicant stated the proposed building would contain the same wall-mounted fixtures as the existing retail center. However, photometrics on the luminaries located on the existing retail building were not provided for review and approval in 2017. The submitted electrical plan shows luminaries on all sides of the building, with a note stating all light fixture selections and colors will be approved by the owner; **light fixture selections and colors are subject to review and approval by the Township. No wall-mounted decorative or architectural lighting shall be installed on the north (rear) facade of the building. Up-lighting or outward shining lighting are also not permitted on the building. An outdoor lighting plan (photometric plan) shall be required specifying the type of fixtures to be used, light intensity, and method of shielding the fixtures so light does not project onto adjoining properties or on any public or private street or right-of-way. Catalog details (lighting fixture specification sheets) for all proposed fixtures shall be provided. Outdoor lights must meet the performance standards of Article 5, Section 18.G of the zoning ordinance.** (Comment outstanding. Architectural plans are not acceptable for the purpose of reviewing outdoor lighting. A lighting (photometric) plan is required and was requested, along with lighting fixture specification sheets for all proposed fixtures. The requested information was not provided. Outdoor lighting cannot be installed on the building or site without prior review and approval by the Township).

### **Planning Commission Options / Recommendation**

The applicant has requested preliminary and final site plan approval. As the site is considered part of Four Corners Square, and the general layout/engineering of the property was previously considered by the Township, proceeding in this manner would not compromise the review of development on the site. The Planning Commission may recommend approval, approval with conditions, or denial of the preliminary site plan to the Township Board; action on the final site plan is determined by the Planning Commission. **Staff recommends approval of the preliminary and final site plan, subject to the items identified in this memorandum being addressed prior to a pre-construction meeting, and the necessary variances being received.**

The following notations summarize the site plan review:

- Recommendation of approval is in accordance with the plans prepared by Nowak & Fraus Engineers dated August 25, 2021 (revision date ~~October 14, 2021~~ **November 8, 2021**), subject to revisions as required. The utility, grading, and storm drainage plans for the site are subject to the approval of the Township Engineer and shall be completed in accordance with the Township Engineering Design Standards.
- Recommendation of approval is in accordance with the plans prepared by G.A.V. & Associates, Inc. dated October 21, 2021, subject to revisions as required.

- Transformer and mechanical equipment (heating, ventilation, air conditioning, and similar systems) shall be screened in accordance with Article 5, Section 19.N.ii of the zoning ordinance. **(Comment addressed. The transformer has been relocated and screened, and such relocation allows the existing arborvitae buffer to remain. Furthermore, five arborvitae have been added to the west side to screen both the transformer and dumpster enclosure from Union Lake Road).**
- Six-inch straight-faced (vertical) curb of concrete construction shall be used around landscape and parking areas. The standard Michigan Department of Transportation (MDOT) detail for six-inch straight-faced curb shall be provided on Sheet C7 of the site plan. **(Comment partially addressed. Curb details have been added to Sheet C8. However, the standard MDOT detail was not provided as requested).**

# CHARTER TOWNSHIP OF WHITE LAKE Zoning Board of Appeals APPLICATION

White Lake Township Planning Department, 7525 Highland Road, White Lake, MI 48383 248-698-3300 x163

APPLICANT'S NAME: A Corners Square <sup>out lot</sup> PHONE: 348-420-4300

ADDRESS: 29580 Northwestern Hwy SFLD 48034

APPLICANT'S EMAIL ADDRESS: same

APPLICANT'S INTEREST IN PROPERTY:  OWNER  BUILDER  OTHER: \_\_\_\_\_

ADDRESS OF AFFECTED PROPERTY: 1449- Union Lake PARCEL # 12 - 36-476-032

CURRENT ZONING: NMU PARCEL SIZE: 0.714 acre

STATE REQUESTED VARIANCE AND ORDINANCE SECTION: \_\_\_\_\_

VALUE OF IMPROVEMENT: \$ \_\_\_\_\_ SEV OF EXISITING STRUCTURE: \$ \_\_\_\_\_

STATE REASONS TO SUPPORT REQUEST: (ADDITIONALS SHEETS MAY BE ATTACHED)

\_\_\_\_\_

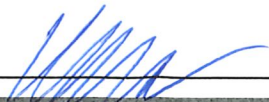
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

APPLICATION FEE: \$440.00 (CALCULATED BY THE PLANNING DEPARTMENT)

APPLICANT'S SIGNATURE:  DATE: 11/5/21

White Lake Township,  
Oakland County, Michigan  
**CONSTRUCTION/SITE PLAN DOCUMENTS**  
Prepared For  
**4 Corners Square LLC**  
PART OF THE SE 1/4 OF SECTION 36,  
WHITE LAKE TOWNSHIP,  
OAKLAND COUNTY, MICHIGAN

**Owner / Developer**

VERITAS  
29580 Northwestern Hwy, Suite 1000  
Southfield, Michigan 48075  
Tel: (248) 559-5555

CONTACT: Shakir W. Alkhafaji, President

**Architect**

GAV & Associates  
24001 Orchard Lake Rd., Suite 180A  
Farmington, MI 48336  
Tel. (248) 985-9101

CONTACT: David Ganezer

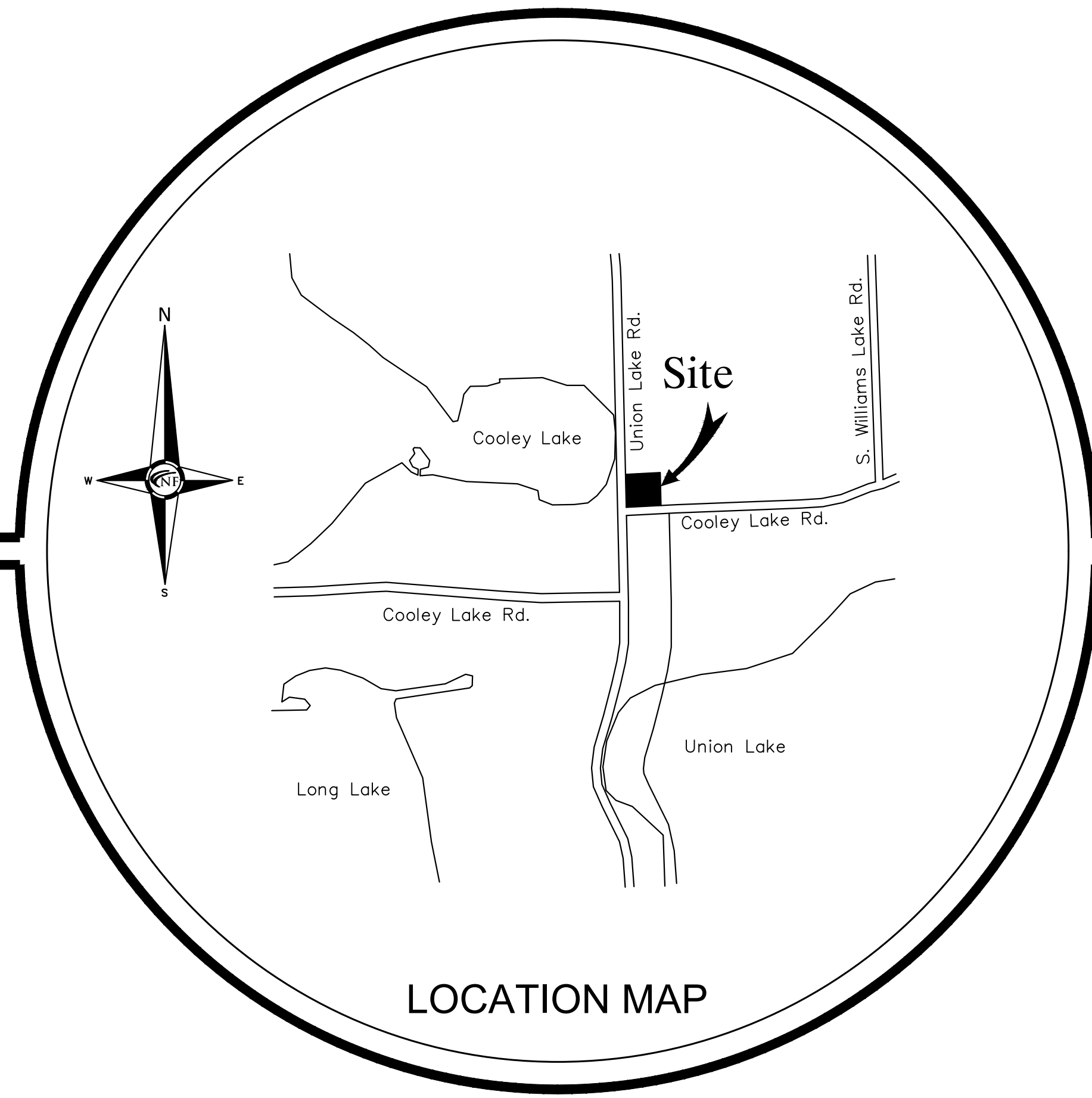
**Civil Engineer**

Nowak & Fraus Engineers  
46777 Woodward Ave.  
Pontiac, MI 48342-5032  
Tel. (248) 332-7931  
Fax. (248) 332-8257

CONTACT: Michael D. Peterson, P.E.

WHITE LAKE TOWNSHIP STANDARD SITE CONSTRUCTION NOTES

1. All construction shall be in accordance with the current standards and specifications of White Lake Charter Township.
2. The developer shall contact the Township Planning Department at (248) 698-3300 to schedule a pre-construction meeting. The developer's prime site contractor shall attend. A copy of all permits must be submitted to the Planning Department prior to scheduling the meeting.
3. The contractor shall contact the Township Engineer at (248) 681-7800 48 hours prior to the beginning of construction. The contractor shall keep the inspector apprised of the need for inspection on a day by day basis. Lacking specific scheduling with the inspector, the contractor shall give 48 hours notice to the Township Engineer prior to re-commencing work requiring inspection. Failure to inform the inspector or the Township Engineer of a work cancellation may result in a one half day inspection charge to the developer.
4. All water main or sanitary sewer work will require full time inspection. Full time inspection will generally be required for underground storm sewer construction with intermittent inspection for retaining walls, concrete curbing and paving operations. Site grading and detention basin construction will generally be inspected on an infrequent basis.
5. The contractor shall contact MISS DIG at (800) 482-7171 72 hours in advance of construction to have existing underground facilities located. Contractor shall contact the White Lake Township Water Department at (248) 698-3300 (ext 8) a minimum of 72 hours in advance of construction to have water utilities located.



**LEGAL DESCRIPTION**

A PARCEL OF LAND BEING A PART OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 36, T.3N, R.8E., WHITE LAKE TOWNSHIP, OAKLAND COUNTY MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 36; THENCE PROCEEDING ALONG THE SOUTH LINE OF SAID SECTION 36, AND THE NOMINAL CENTERLINE OF COOLEY LAKE ROAD, N 89° 57' 40" W, 726.90 FEET; THENCE N 00° 00' 00" E, 43.00 FEET TO A POINT ON THE NORTH LINE OF COOLEY LAKE ROAD AS DEDICATED TO THE ROAD COMMISSION OF OAKLAND COUNTY, RECORDED IN LIBER 4601 OF PLATS, PAGES 224 AND 225 O.C.R.; THENCE PROCEEDING ALONG THE 43' RIGHT OF WAY LINE, N 89° 57' 40" W., 403.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG THE NORTH LINE OF COOLEY LAKE ROAD, N 89° 57' 40" W, 201.61 FEET TO A POINT ON THE WEST LINE OF THE EAST 1/2 OF THE SOUTHEAST 1/4 AND THE NOMINAL CENTERLINE OF UNION LAKE ROAD; THENCE PROCEEDING ALONG THE WEST LINE OF THE EAST 1/2 OF THE SOUTHEAST 1/4 AND THE NOMINAL CENTERLINE OF UNION LAKE ROAD N 00° 05' 45" E, 220.00 FEET; THENCE S 89° 57' 40" E, 201.24 FEET; THENCE S 00° 00' 00" W, 220.00 FEET TO THE POINT OF BEGINNING. CONTAINING 44,313 GROSS SQUARE FEET OR 1.017 GROSS ACRES OF LAND MORE OR LESS.

OR CONTAINING 31,113 NET SQUARE FEET, 0.714 NET ( MINUS FUTURE 60' R.O.W.)

ALSO BEING SUBJECT TO THE RIGHTS OF THE PUBLIC AND OR ANY OTHER GOVERNMENTAL UNIT THEREOF IN THAT PART OF UNION LAKE ROAD, USED, TAKEN OR DEEDED FOR STREET, ROAD OR HIGHWAY PURPOSES, ALSO BEING SUBJECT TO ANY EASEMENTS, RESTRICTIONS OR CONDITIONS OF RECORD.

PARCEL NO.: 12-36-476-032

**SHEET INDEX**

- C0 Cover Sheet
- C1 Topographic Survey
- C2 Demolition Plan
- C3 Stringer Dimension Plan
- C4 Paving & Grading Plan
- C5 Utility Plan
- C6 Utility Details Plan
- C7 Soil Erosion / Sedimentation Control Plan
- C8 General Construction Requirements, Contractor's Duties, Notes and Details Plan
- L1 Landscape Plan

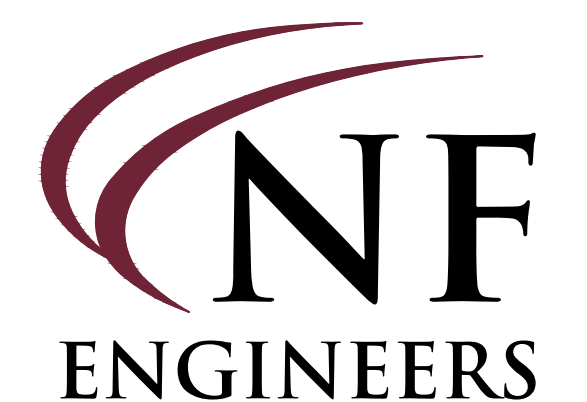
Standard Details

- White Lake Township Sanitary Sewer Standard Details
- White Lake Township Storm Sewer Standard Details
- White Lake Township Water Main Standard Details
- Oakland County WRC Soil Erosion & Sedimentation Control Details

Project Name

# 4 Corners Retail Center

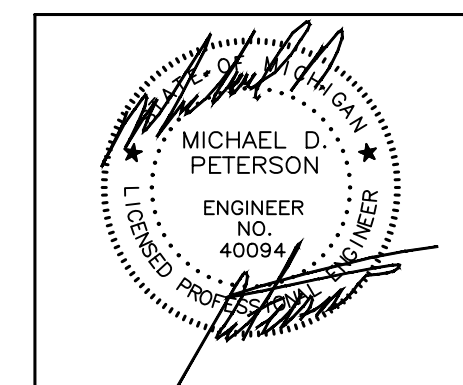
<b>REVISIONS:</b>	
10-14-21	ISSUED FOR SITE PLAN REVIEW
11-08-21	REVISED PER SITE PLAN REVIEW

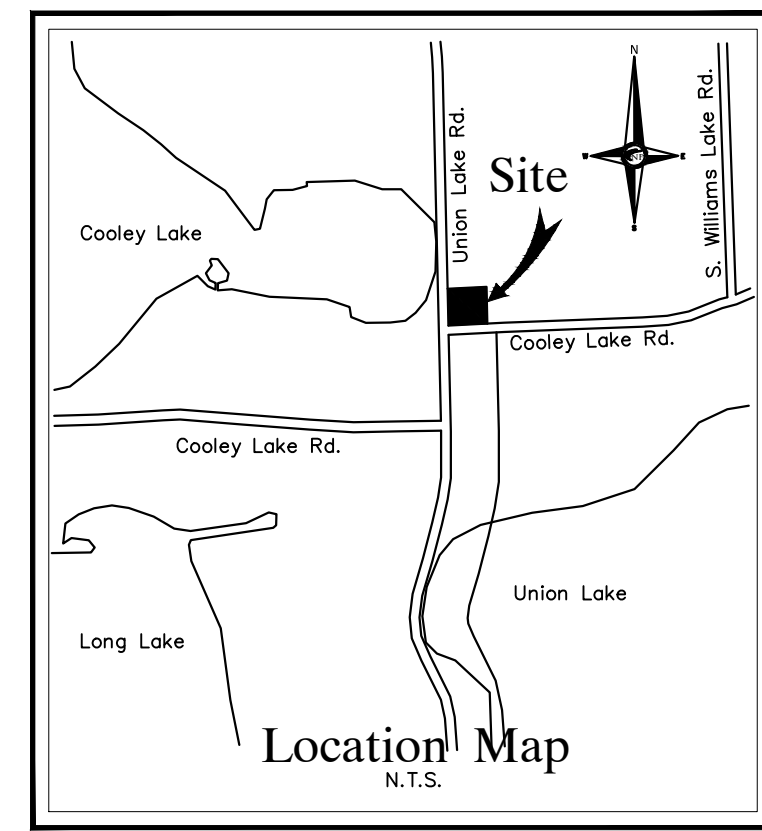
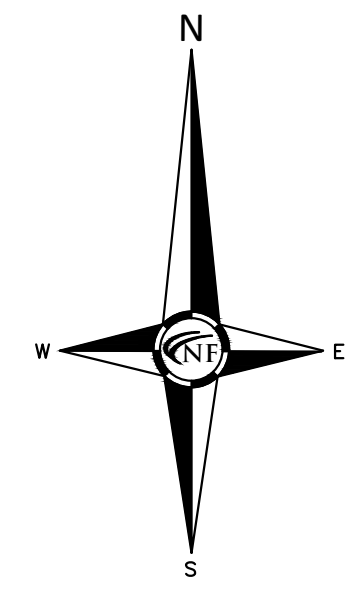


CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
46777 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
TEL. (248) 332-7931  
FAX. (248) 332-8257  
WWW.NOWAKFRAUS.COM

N & F JOB #J635-03

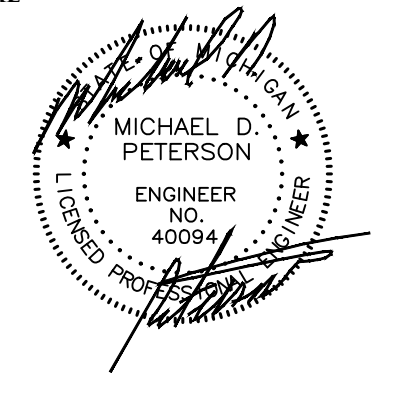




**NF ENGINEERS**  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
 4677 WOODWARD AVE.  
 PONTIAC, MI 48342-5032  
 TEL. (248) 332-7931  
 FAX. (248) 332-8257  
 WWW.NOWAKFRAUS.COM

SEAL



PROJECT  
 4 Corners Retail Center  
 1449 Union Lake Road  
 White Lake Township

CLIENT  
 VERITAS  
 29580 Northwestern Hwy,  
 Suite 1000  
 Southfield, Michigan 48075

Contact: Shakir W. Alkhafaji, President  
 Phone: (248) 559-5555

PROJECT LOCATION  
 Part of the E. 1/2 of the SE. 1/4 of Section 8 T.3N., R.8E. White Lake Township, Oakland County, Michigan

SHEET  
 Topographic Survey



Know what's below  
 Call before you dig.

DATE ISSUED/REVISED  
 10-14-21 ISSUED FOR SITE PLAN REVIEW  
 11-08-21 REVISED PER SITE PLAN REVIEW

DRAWN BY:  
 N. Naoum  
 DESIGNED BY:  
 K. Navaroli  
 APPROVED BY:  
 DATE:  
 08-25-2021  
 SCALE: 1" = 20'  
 NFE JOB NO. SHEET NO.  
**J635-03 C1**

**LEGAL DESCRIPTION: PARCEL A**

A PARCEL OF LAND BEING A PART OF THE EAST 1/2 OF THE SOUTHWEST 1/4 OF SECTION 36, T.3N., R.8E., WHITE LAKE TOWNSHIP, OAKLAND COUNTY MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 36; THENCE PROCEEDING ALONG THE SOUTH LINE OF SAID SECTION 36, AND THE NOMINAL CENTERLINE OF COOLEY LAKE ROAD, N 89° 57' 40" W, 726.90 FEET; THENCE N 00° 00' 00" E, 43.00 FEET TO A POINT ON THE NORTH LINE OF COOLEY LAKE ROAD AS DEDICATED TO THE ROAD COMMISSION OF OAKLAND COUNTY, RECORDED IN LIBER 4601 OF PLATS, PAGES 224 AND 225, O.C.R.; THENCE PROCEEDING ALONG THE EAST 1/2 OF THE SOUTHWEST 1/4 AND THE NOMINAL CENTERLINE OF UNION LAKE ROAD; THENCE CONTINUING ALONG THE WEST LINE OF THE EAST 1/2 OF THE SOUTHWEST 1/4 AND THE NOMINAL CENTERLINE OF UNION LAKE ROAD N 00° 05' 45" E, 220.00 FEET; THENCE S 89° 57' 40" E, 201.24 FEET; THENCE S 00° 00' 00" W, 220.00 FEET TO THE POINT OF BEGINNING, CONTAINING 44,313 GROSS SQUARE FEET OR 1.017 GROSS ACRES OF LAND MORE OR LESS.

OR CONTAINING 31,113 NET SQUARE FEET, 0.714 NET (MINUS FUTURE 60' R.O.W.)

ALSO BEING SUBJECT TO THE RIGHTS OF THE PUBLIC AND OR ANY OTHER GOVERNMENTAL UNIT THEREOF IN THAT PART OF UNION LAKE ROAD, USED, TAKEN OR DEEDED FOR STREET, ROAD OR HIGHWAY PURPOSES, ALSO BEING SUBJECT TO ANY EASEMENTS, RESTRICTIONS OR CONDITIONS OF RECORD.

**COVID-19 PANDEMIC CONDITION**

DUE TO THE UNPRECEDENTED COVID-19 PANDEMIC CONDITION AND RESTRICTIONS THE STANDARD DATA WHICH IS OBTAINED FROM MISS DIG / CALL 811 HAS BEEN RESTRICTED TO CRITICAL INFRASTRUCTURE ONLY. NFE WILL MAKE EVERY EFFORT TO OBTAIN CURRENT REFERENCE DATA FROM THE GOVERNING AGENCIES. HOWEVER, THIS DATA MAY BE PARTIAL OR INCOMPLETE. NFE WILL ISSUE THIS SURVEY WITH THE BEST AVAILABLE INFORMATION FROM OUR FIELD SURVEY AND OTHER AVAILABLE REFERENCE DATA. NFE WILL NOT BE RESPONSIBLE FOR INCOMPLETE OR PARTIAL DATA PROVIDED BY THIRD PARTY FACILITY OWNERS.

ALL SURVEYS BEING UTILIZED FOR DESIGN PURPOSES BY OTHERS; IT WILL BE THE CLIENT'S OBLIGATION TO UPDATE THE UTILITY INFORMATION AS IT BECOMES AVAILABLE. NFE IS NOT RESPONSIBLE FOR BURIED UTILITIES FOR WHICH PLANS WERE NOT FURNISHED OR CANNOT BE OBSERVED IN THE FIELD.

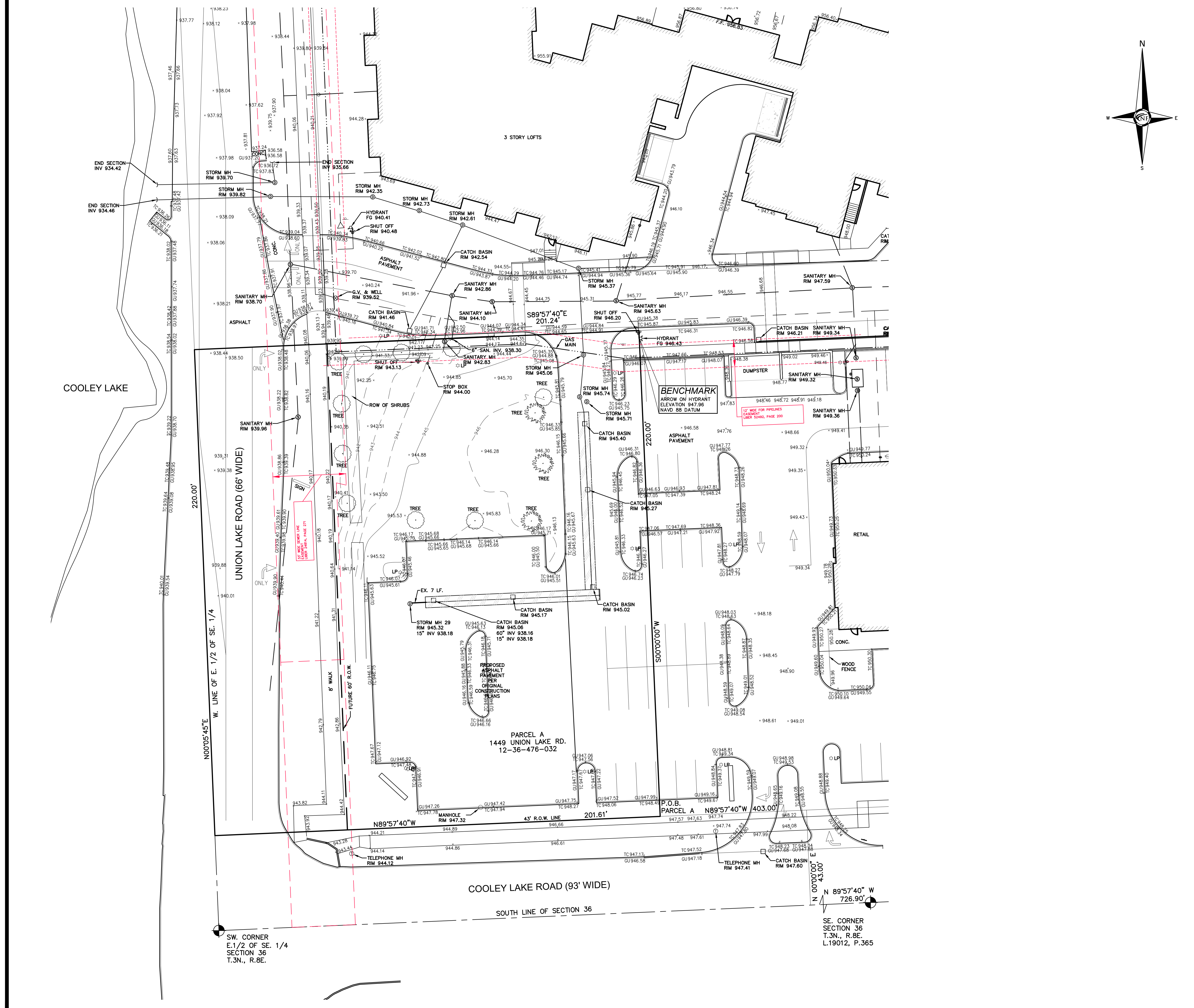
**MISS DIG / UTILITY DISCLAIMER NOTE**

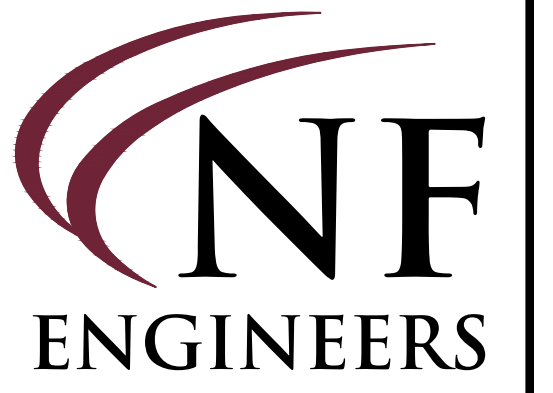
A MISS DIG TICKET NUMBER PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY, DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

**TOPOGRAPHIC SURVEY NOTES**

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.  
 UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES; AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.  
 THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.

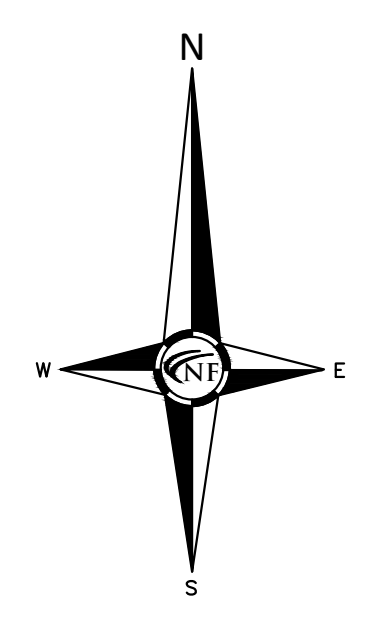
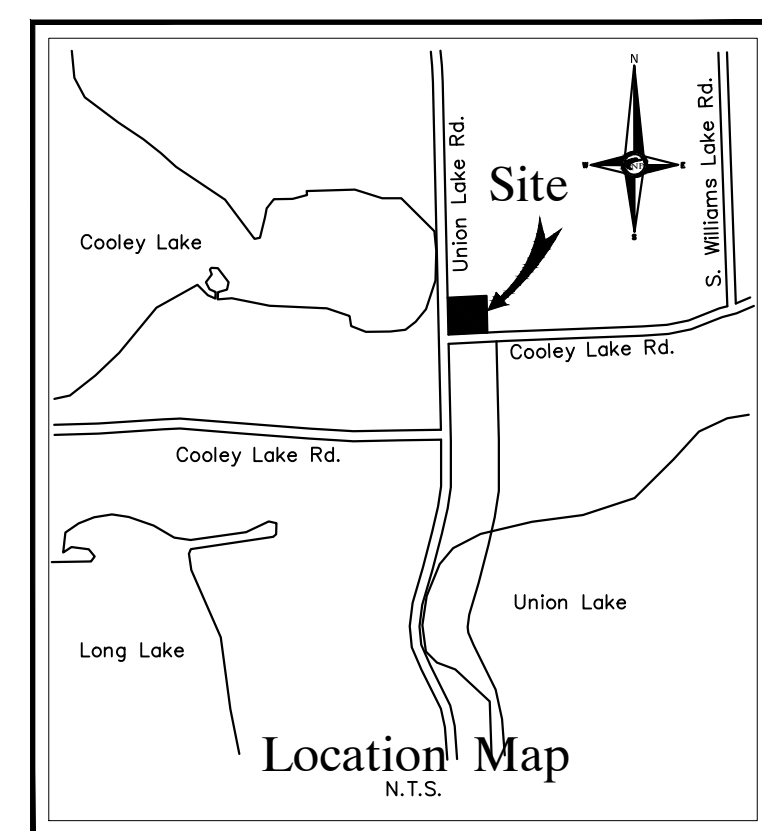
LEGEND	
	MANHOLE
	HYDRANT
	MANHOLE
	UTILITY POLE
	GUY WIRE
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN
	EXISTING SANITARY SEWER
	EXISTING SAN. CLEAN OUT
	EXISTING WATER MAIN
	EXISTING STORM SEWER
	EX. R.Y. CATCH BASIN
	EXISTING BURIED CABLES
	OVERHEAD LINES





CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
46777 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
TEL. (248) 332-7931  
FAX. (248) 332-8257  
WWW.NOWAKFRAUS.COM



**DEMOLITION NOTES**

DEMOLITION OF SITE IMPROVEMENTS SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE PUBLIC AGENCY HAVING JURISDICTION OVER SAID DEMOLITION. FOR ANY DEMOLITION WITHIN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR, AND SECURE, ALL NECESSARY PERMITS AND LICENSES LIKEWISE SHALL ARRANGE FOR ALL SITE INSPECTIONS.

SITE DEMOLITION INCLUDES THE COMPLETE REMOVAL OF SITE IMPROVEMENTS AND OFF-SITE DISPOSAL. DEBRIS SHALL BE TRANSPORTED TO AN APPROPRIATE DISPOSAL FACILITY THAT IS LICENSED FOR THAT TYPE OF DEBRIS.

THE CONTRACTOR SHALL COORDINATE TRUCK ROUTES WITH THE MUNICIPALITY PRIOR TO COMMENCEMENT OF SITE DEMOLITION. ALL TRUCKS SHALL BE TARPED OR PROPERLY SECURED TO CONTAIN DEMOLITION DEBRIS PRIOR TO LEAVING SITE.

EXISTING ON-SITE UNDERGROUND UTILITIES AND BUILDING SERVICES HAVE BEEN INDICATED BASED UPON THE BEST AVAILABLE UTILITY RECORDS AND/OR ON-SITE INSPECTION. NO GUARANTEE IS MADE BY THE DESIGN ENGINEER, AS TO THE COMPLETENESS OR ACCURACY OF UTILITY DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF UTILITY INFORMATION (THE DESIGN ENGINEER MAKES NO GUARANTEE NOR ASSUMES ANY LIABILITY AS TO THE COMPLETENESS AND/OR ACCURACY OF UTILITY DATA).

PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EXISTING UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR IN THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE/ACTIVE THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO SITE DEMOLITION.

\* THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF THE SITE DEMOLITION.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES ELECTRICAL SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES COMMUNICATION SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE APPROPRIATE CABLE MEDIA COMPANY. REMOVAL OF CABLE SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE CABLE COMPANY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF PRIVATE UTILITY COMPANIES AND COORDINATE UTILITY SERVICE SHUT OFF/DISCONNECT, PRIOR TO DEMOLITION OF EXISTING STRUCTURES OR PROPERTIES.

ALL UTILITY METERS SHALL BE REMOVED BY THE APPROPRIATE UTILITY COMPANY.

ANY ON-SITE STORM SEWER FACILITIES LOCATED DURING DEMOLITION SHALL BE REMOVED AND BULK HEADED AT THE PROPERTY LINE IF INDICATED FOR REMOVAL ON THE PLANS.

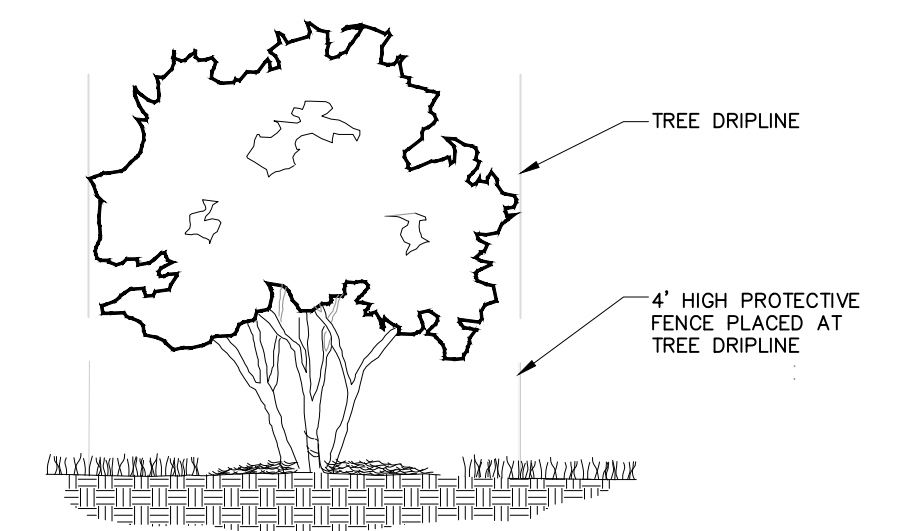
PRIOR TO BUILDING DEMOLITION, ALL HAZARDOUS MATERIAL SHALL BE REMOVED BY OTHERS. THE DEMOLITION CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUSPICIOUS MATERIAL BE FOUND.

WATER SERVICES AND/OR STOP-BOX SHALL BE PRESERVED AND BULK HEADED AT THE PROPERTY LINE OR AS DIRECTED BY THE OWNER'S REPRESENTATION.

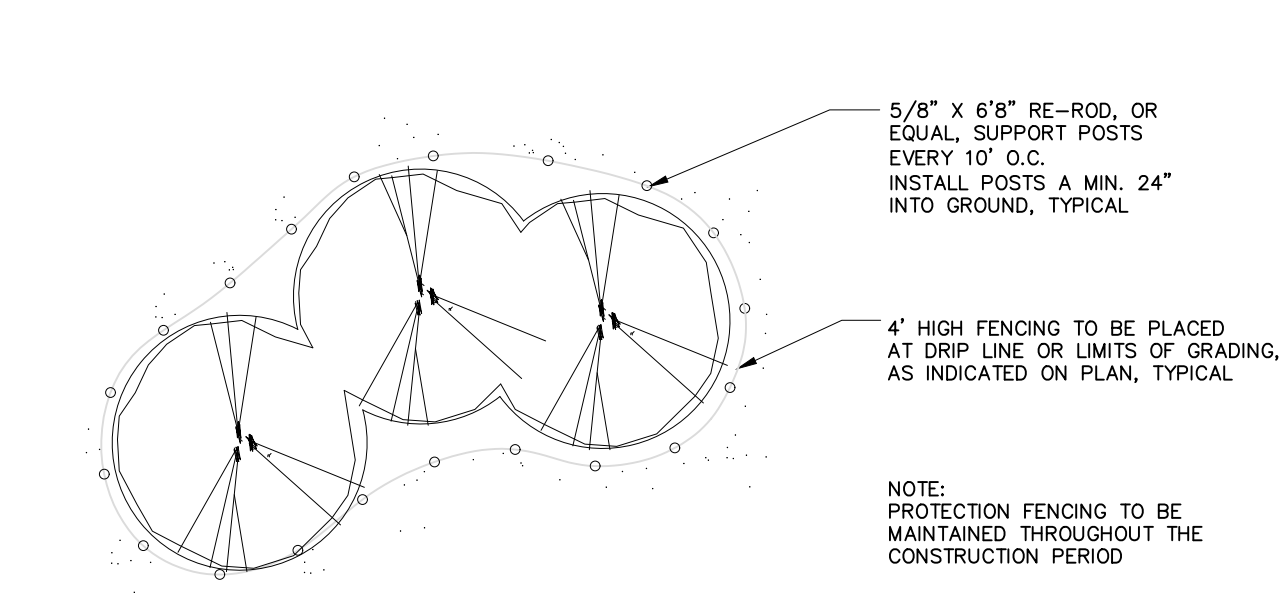
WHERE EXISTING BUILDINGS PLANNED FOR DEMOLITION FALL WITHIN PROPOSED BUILDING FOOT PRINTS, BASEMENT FLOOR SLABS, FOUNDATION WALLS AND FOOTINGS SHALL BE COMPLETELY REMOVED AND BACK FILLED WITH MOST CLASS II GRANULAR MATERIAL AND BE MACHINE COMPACTED TO A MINIMUM OF 98% OF MATERIALS MAXIMUM DENSITY.

**GENERAL TREE PROTECTION NOTES**

- APPROVED TREE PROTECTION SHALL BE ERECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL THE IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PRESERVED.
- NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINE.
- WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF GRADING LINE.
- DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE, SCHEDULED TO REMAIN.
- ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
- SMALLS SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
- TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
- ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED BY RIGIDLY STAKED FENCING.
- THE PARKING OF IDLE AND RUNNING EQUIPMENT SHALL BE PROHIBITED UNDER THE DRIP LINE OF PROTECTED TREES.
- THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
- ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
- THE GRUBBING OF UNDERSTORY VEGETATION WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR MINIMALLY WITH A HYDRO-AXE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT PER ORDINANCE GUIDELINES, FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN.
- TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL, BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNERS REPRESENTATIVE.



TREE PROTECTION DETAIL-SECTION N.T.S.



TREE PROTECTION DETAIL-PLAN N.T.S.

**TOPOGRAPHIC SURVEY NOTES**

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

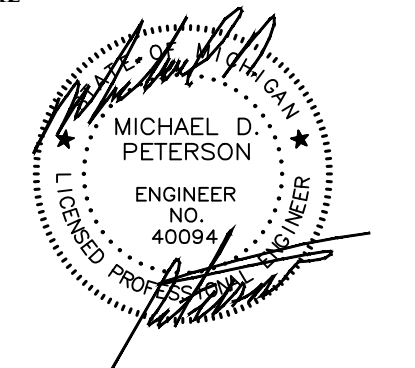
UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS OR EXACTNESS OF LOCATION.

THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.

**LEGEND**

	MANHOLE		EXISTING SANITARY SEWER
	HYDRANT		EXISTING SAN. CLEAN OUT
	GATE VALVE		EXISTING WATER MAIN
	CATCH BASIN		EXISTING STORM SEWER
	UTILITY POLE		EX. R. Y. CATCH BASIN
	GUY POLE		EXISTING BURIED CABLES
	GUY WIRE		OVERHEAD LINES
	LIGHT POLE		SIGN
	EXISTING GAS MAIN		EXISTING UTILITY TO BE REMOVED
	EXISTING UTILITY TO BE ABANDONED		12" MAPLE
	INDICATES EXISTING TREE TO BE REMOVED		INDICATES AREAS OF PAVEMENT, BUILDINGS, ETC. TO BE REMOVED

SEAL



PROJECT  
4 Corners Retail Center  
1449 Union Lake Road  
White Lake Township

CLIENT  
VERITAS  
29580 Northwestern Hwy,  
Suite 1000  
Southfield, Michigan 48075

Contact: Shahir W. Alkhafaji, President  
Phone: (248) 559-5555

PROJECT LOCATION  
Part of the E. 1/2 of the SE. 1/4 of Section 8 T.3N., R.8E. White Lake Township, Oakland County, Michigan

SHEET  
Demolition Plan



Know what's below  
Call before you dig.

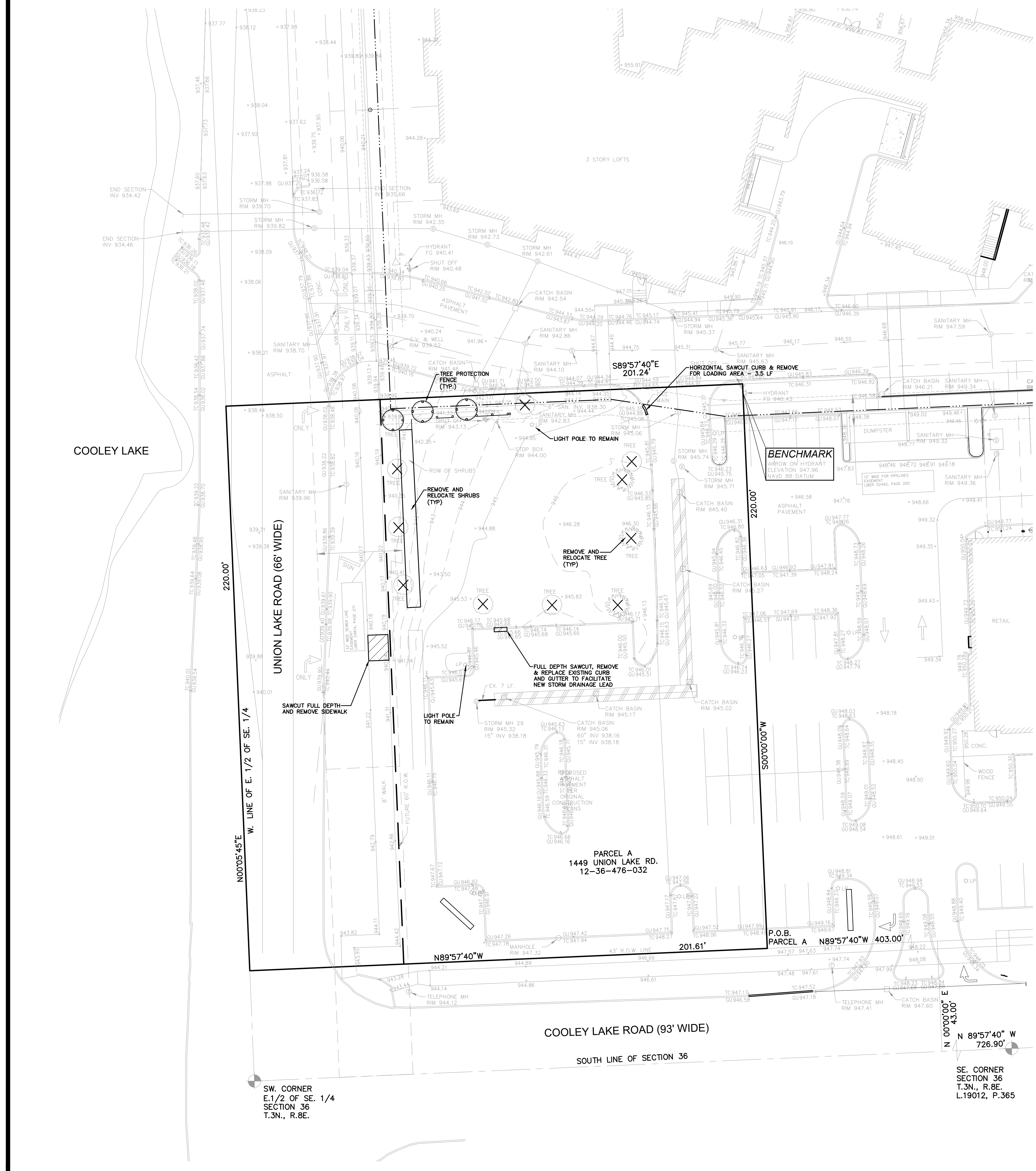
DATE ISSUED/REVISED  
10-14-21 ISSUED FOR SITE PLAN REVIEW  
11-08-21 REVISED PER SITE PLAN REVIEW

DRAWN BY:  
N. Naoum  
DESIGNED BY:  
M. Kurmas  
APPROVED BY:  
M. Peterson

DATE:  
08-25-2021

SCALE: 1" = 20'  
20 10 0 10 20 30

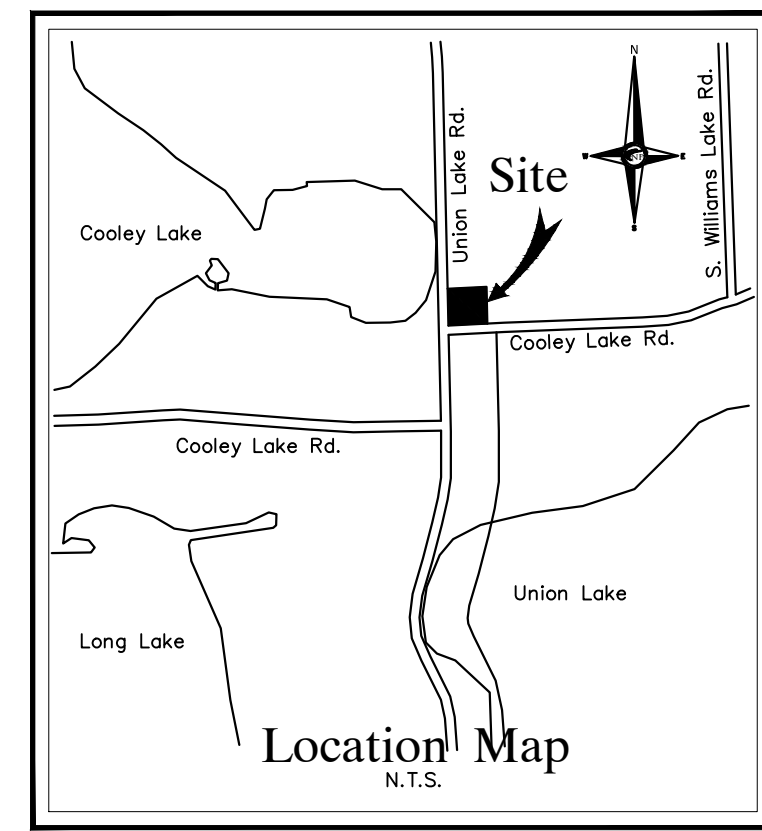
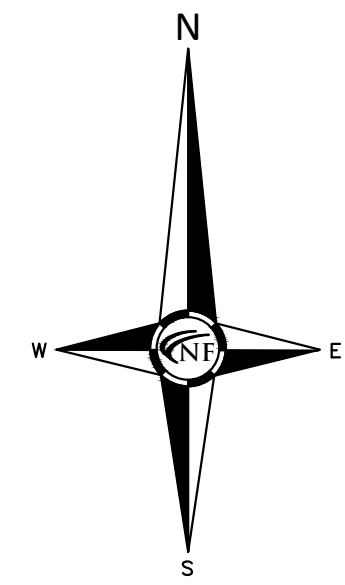
NFE JOB NO. SHEET NO.  
J635-03 C2



SW CORNER  
E.1/2 OF SE. 1/4  
SECTION 36  
T.3N., R.8E.

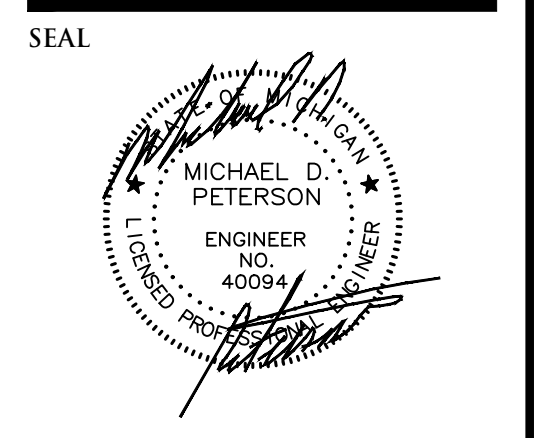
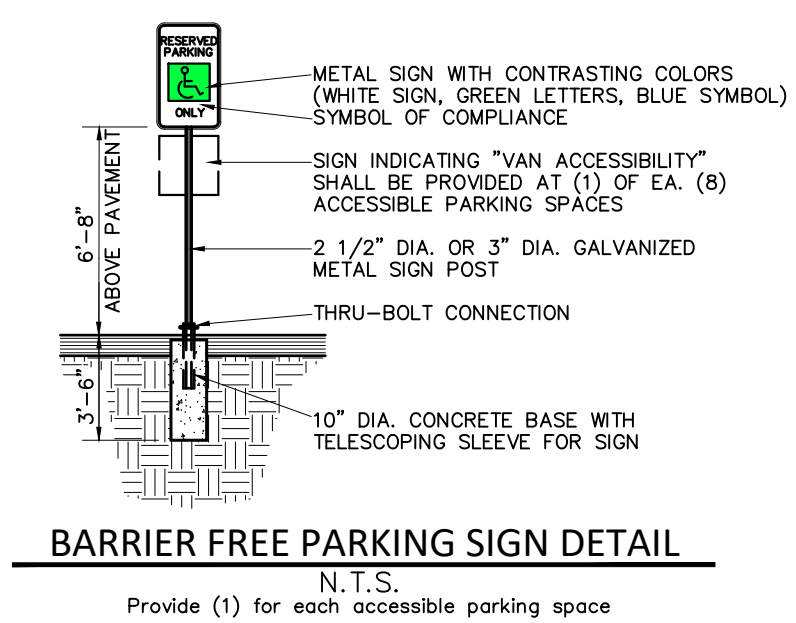
SE CORNER  
SECTION 36  
T.3N., R.8E.  
L.19012, P.365





**NF ENGINEERS**  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
 46777 WOODWARD AVE.  
 PONTIAC, MI 48342-5032  
 TEL. (248) 332-7931  
 FAX. (248) 332-8257  
 WWW.NOWAKFRAUS.COM



PROJECT  
 4 Corners Retail Center  
 1449 Union Lake Road  
 White Lake Township

CLIENT  
 VERITAS  
 29580 Northwestern Hwy,  
 Suite 1000  
 Southfield, Michigan 48075

Contact: Shakir W.  
 Alkhafaji, President  
 Phone: (248) 559-5555

PROJECT LOCATION  
 Part of the E. 1/2  
 of the SE. 1/4 of Section 8  
 T.3N., R.8E.  
 White Lake Township,  
 Oakland County, Michigan

SHEET  
 Stringer Dimension Plan



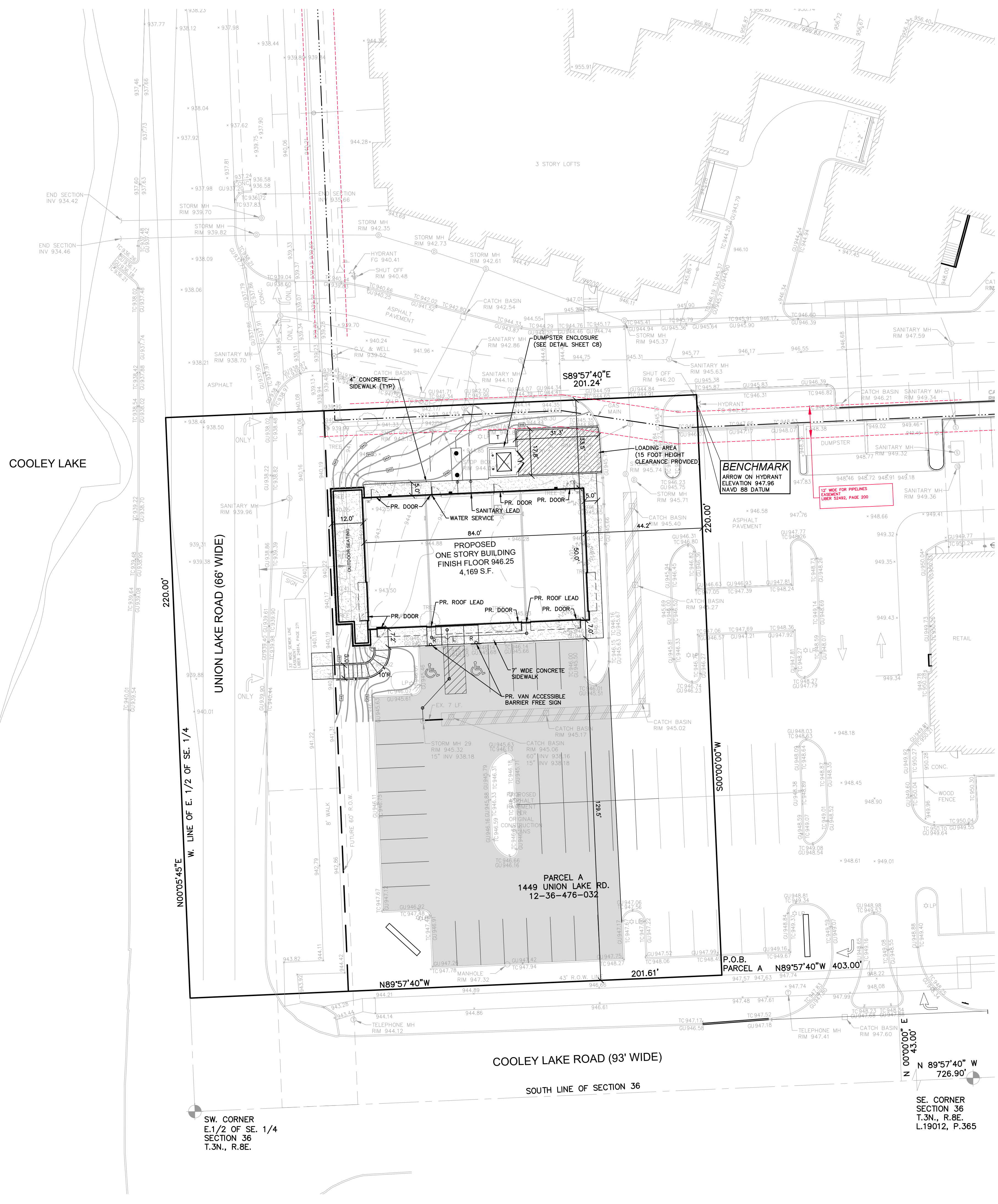
DATE ISSUED/REVISED  
 10-14-21 ISSUED FOR SITE PLAN REVIEW  
 11-08-21 REVISED PER SITE PLAN REVIEW

DRAWN BY:  
 N. Naoum  
 DESIGNED BY:  
 M. Kurmas  
 APPROVED BY:  
 M. Peterson

DATE:  
 08-25-2021

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.  
**J635-03 C3**



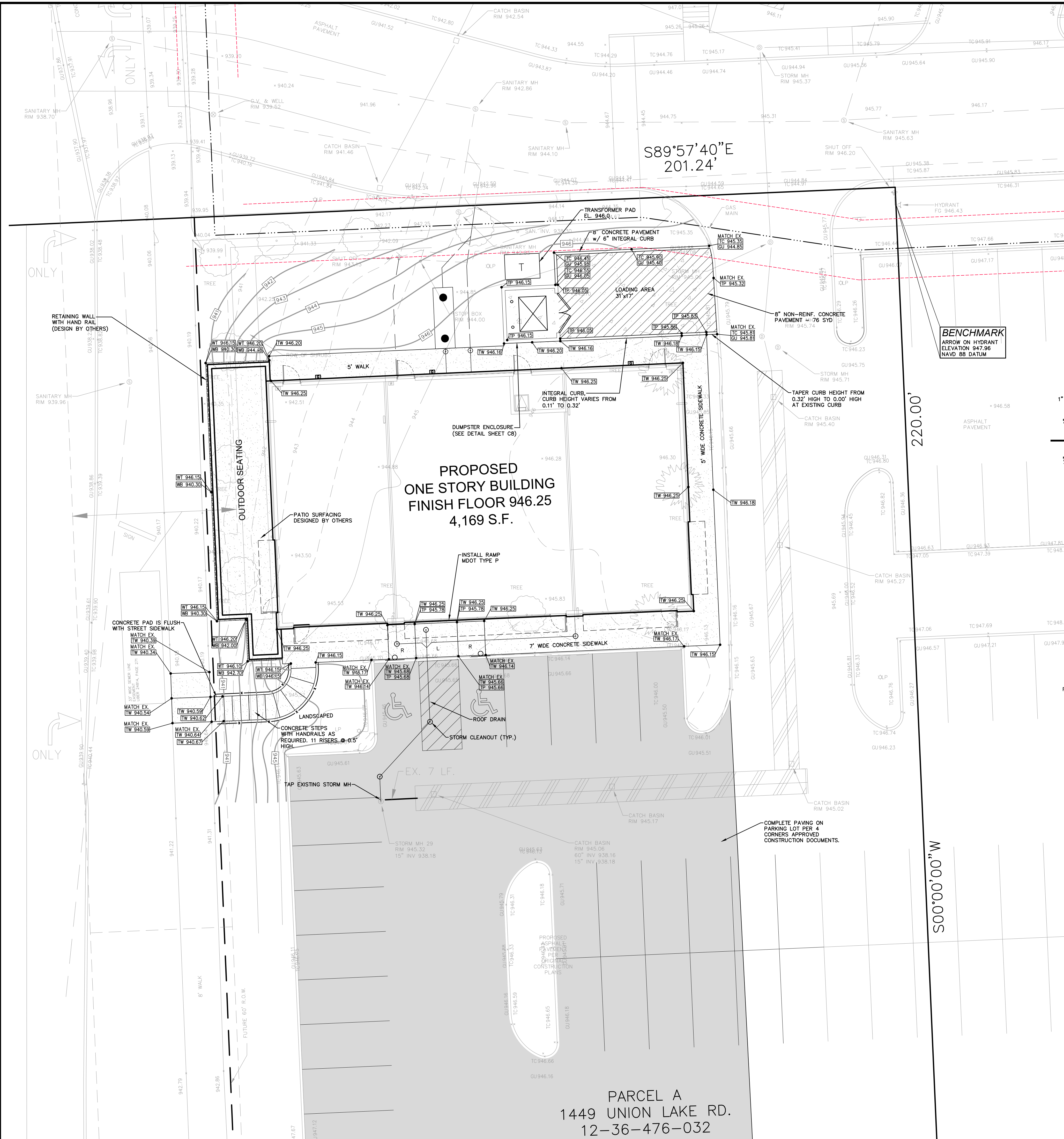
SITE DATA  
 Zoned: NMU Neighborhood Mixed Use  
 Building Setbacks:  
 Front= 0'  
 Sides= 0'  
 Rear= 5'

**PAVING LEGEND**

	PROPOSED CONCRETE PAVEMENT
	PROPOSED ASPHALT PAVEMENT

**LEGEND**

	MANHOLE		EXISTING SANITARY SEWER
	HYDRANT		SAN. CLEAN OUT
	MANHOLE CATCH BASIN		EXISTING WATERMAIN
	UTILITY POLE		EXISTING STORM SEWER
	GUY POLE		EX. R. Y. CATCH BASIN
	GUY WIRE		EXISTING BURIED CABLES
	C.O.		OVERHEAD LINES
	MANHOLE		LIGHT POLE
	HYDRANT		SIGN
	INLET		EXISTING GAS MAIN
	C.B.		PR. SANITARY SEWER
	MANHOLE		PR. WATER MAIN
			PR. STORM SEWER
			PR. R. Y. CATCH BASIN
			PROPOSED LIGHT POLE

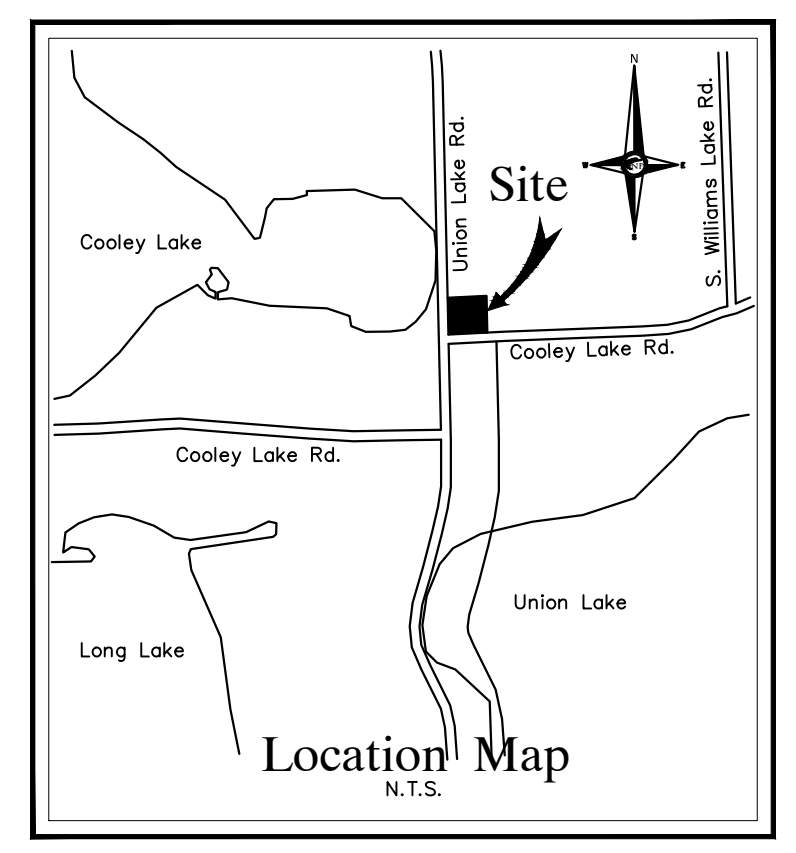
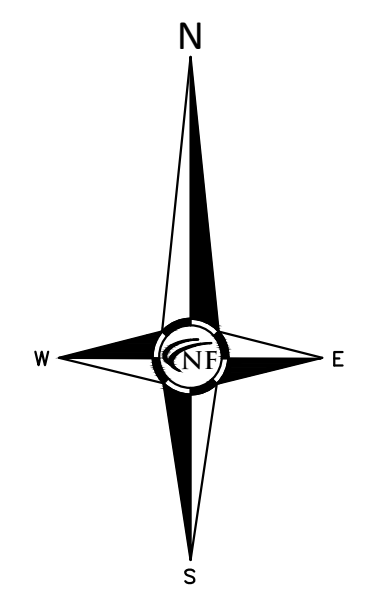


S89°57'40"E  
201.24'

**BENCHMARK**  
ARROW ON HYDRANT  
ELEVATION 947.96  
NAVD 88 DATUM

**PROPOSED ONE STORY BUILDING**  
FINISH FLOOR 946.25  
4,169 S.F.

PARCEL A  
1449 UNION LAKE RD.  
12-36-476-032



**NF ENGINEERS**  
CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
4677 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
TEL. (248) 332-7931  
FAX. (248) 332-8257  
WWW.NOWAKFRAUS.COM

**GENERAL PAVING NOTES**

PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

**CONCRETE:** PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES.

**ASPHALT:** BASE COURSE - MDT BITUMINOUS MIXTURE HMA 4E1, 20A; SURFACE COURSE - MDT BITUMINOUS MIXTURE HMA 5E1, 20A; ASPHALT CEMENT PENETRATION GRADE 85-100, BOND COAT - MDT SS-1H EMULSION AT 0.10 GALLON PER SQUARE YARD; MAXIMUM 2 INCH LIFT.

PAVEMENT BASE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.

ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.

ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-5164.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.

ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.

ALL SIDEWALK RAMP, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.

CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.

FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.

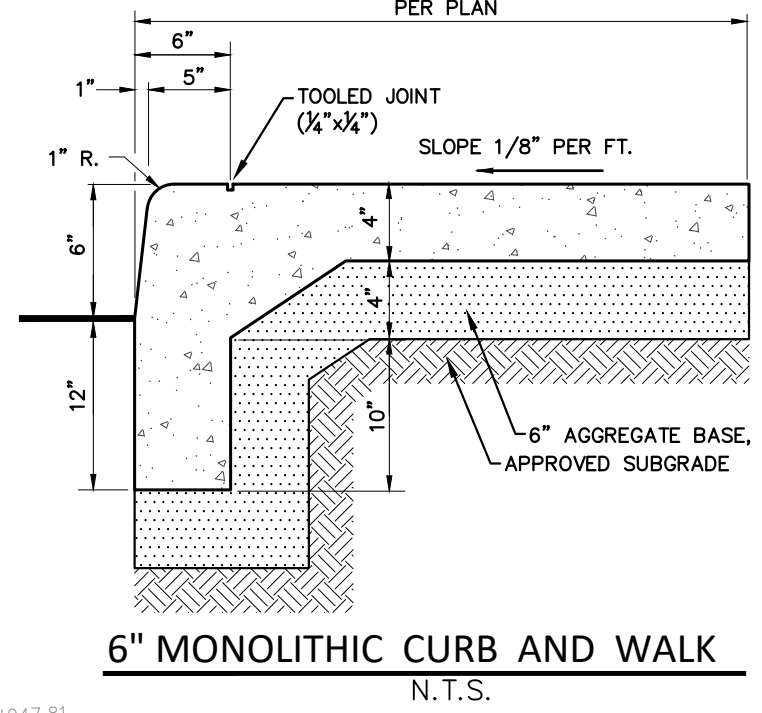
EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS.

EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADII.

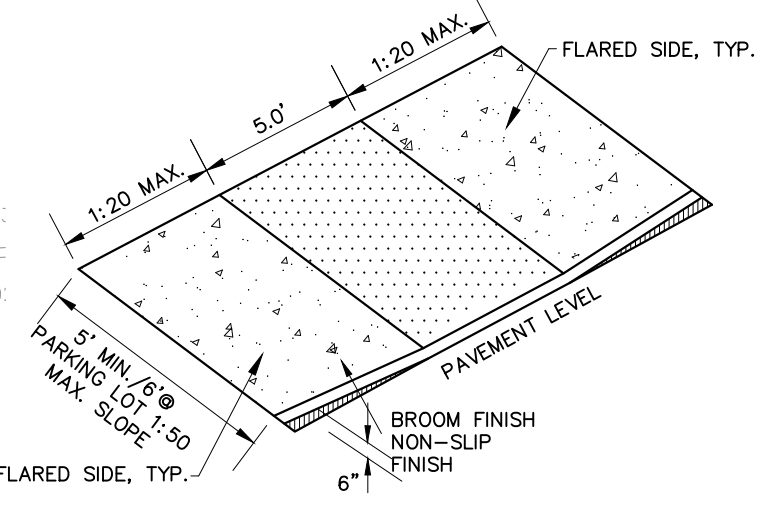
SIDEWALK RAMP, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.

ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.

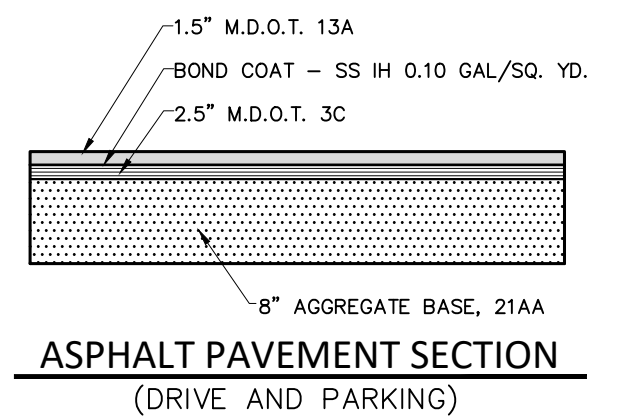
FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 98% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.



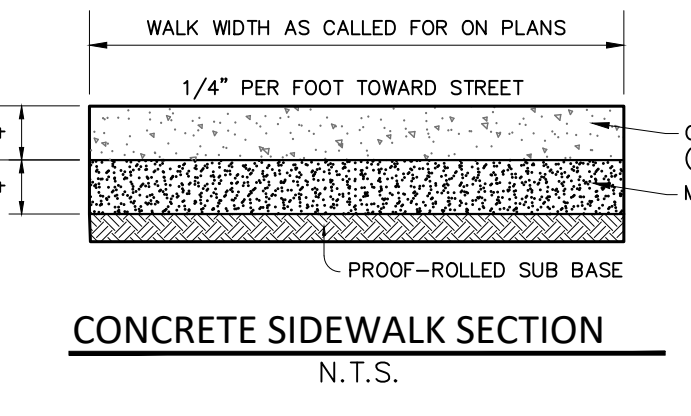
**6" MONOLITHIC CURB AND WALK**  
N.T.S.



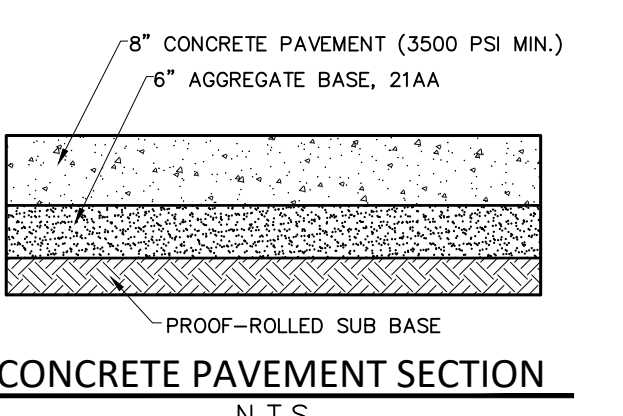
**BARRIER FREE RAMP DETAIL**  
N.T.S.



**ASPHALT PAVEMENT SECTION**  
(DRIVE AND PARKING)



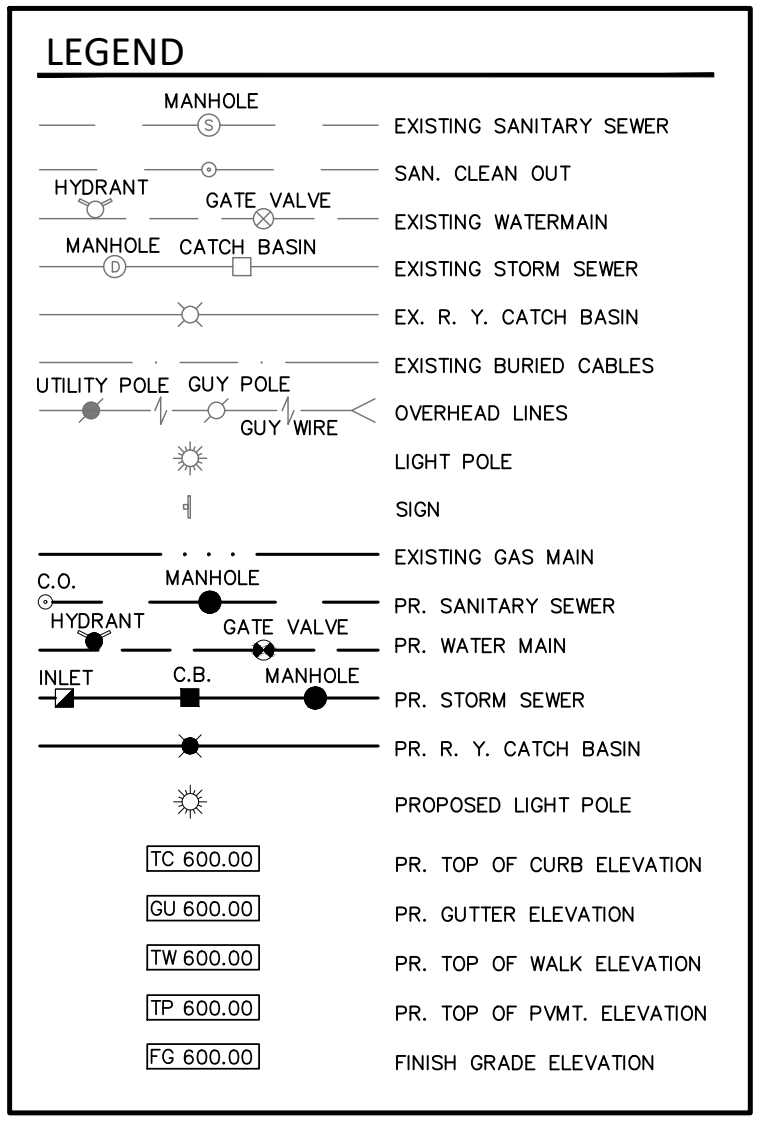
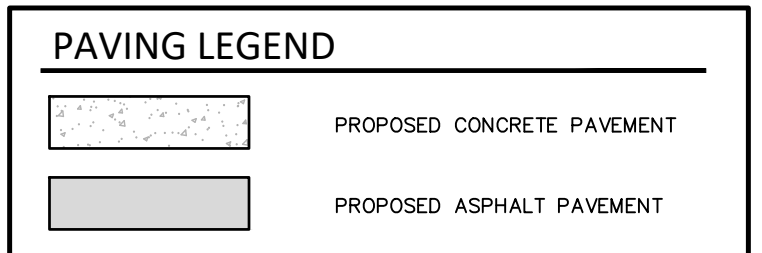
**CONCRETE SIDEWALK SECTION**  
N.T.S.



**CONCRETE PAVEMENT SECTION**  
N.T.S.

**ESTIMATED QUANTITIES PAVING**

DESCRIPTION	QUANTITY	UNITS
4" ASPHALT ON 8" 21AA BASE	20	S.Y.
4" CONCRETE SIDEWALK	1,527	S.F.
8" NON-REINFORCED CONCRETE	96	S.Y.



SEAL

**PROJECT**  
4 Corners Retail Center  
1449 Union Lake Road  
White Lake Township

**CLIENT**  
VERITAS  
29580 Northwestern Hwy,  
Suite 1000  
Southfield, Michigan 48075

Contact: Shkir W. Alkhafaji, President  
Phone: (248) 559-5555

**PROJECT LOCATION**  
Part of the E. 1/2 of the SE. 1/4 of Section 8 T.3N. , R.8E. White Lake Township, Oakland County, Michigan

**SHEET Paving & Grading Plan**

**811**  
Know what's below  
Call before you dig.

DATE	ISSUED/REVISED
10-14-21	ISSUED FOR SITE PLAN REVIEW
11-08-21	REVISED PER SITE PLAN REVIEW

**DRAWN BY:**  
N. Naoom

**DESIGNED BY:**  
M. Kurmas

**APPROVED BY:**  
M. Peterson

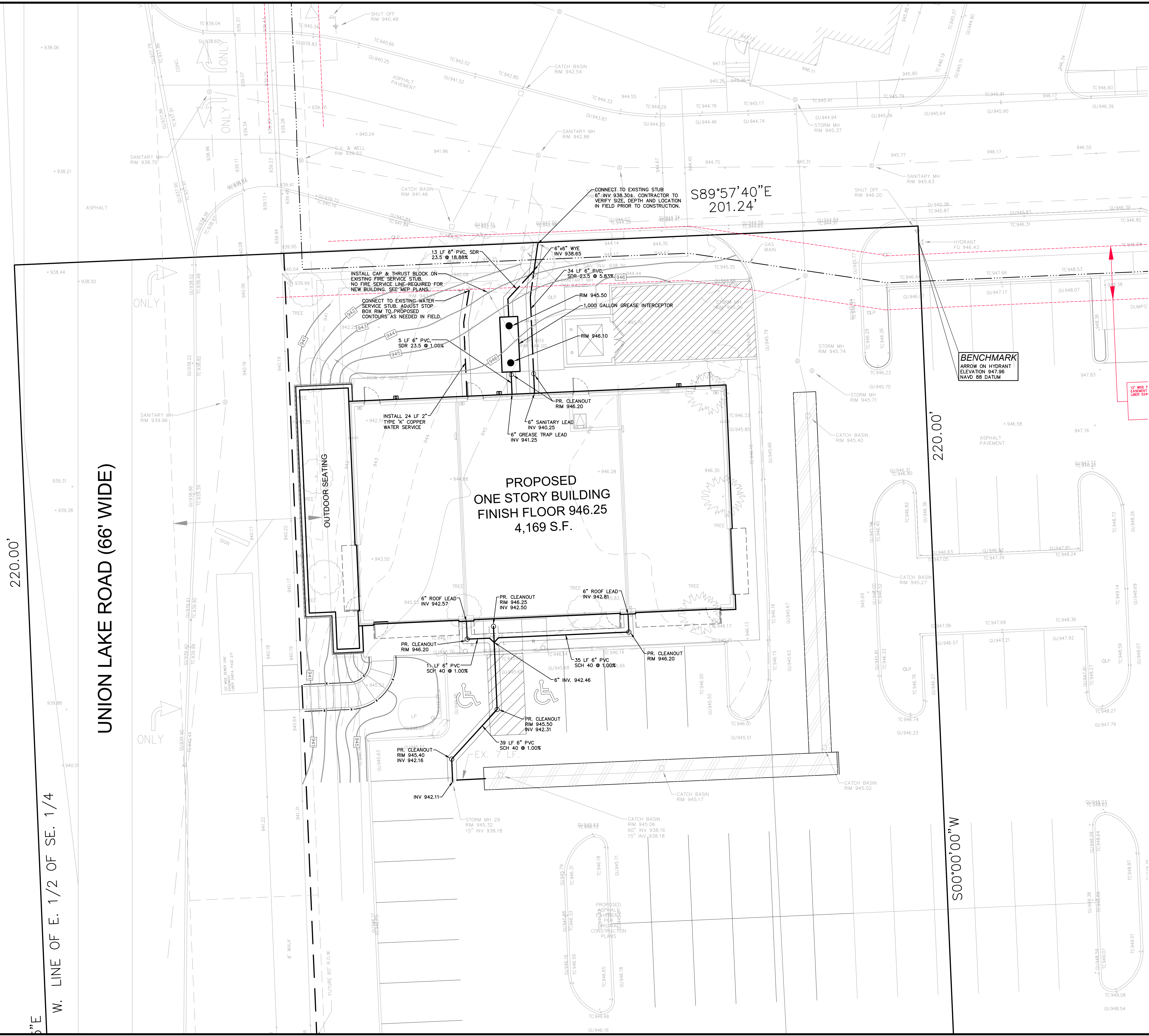
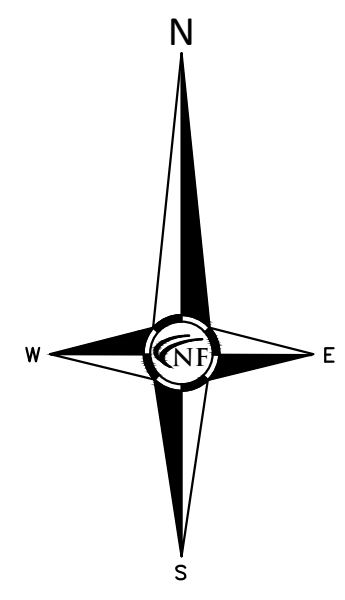
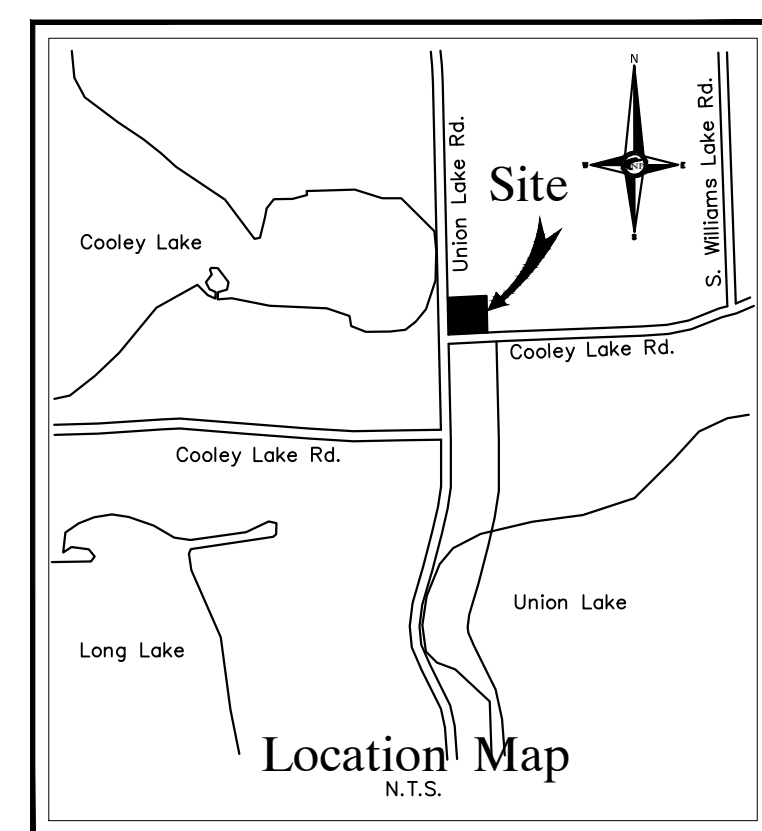
**DATE:**  
08-25-2021

**SCALE:** 1" = 10'

NFE JOB NO. **J635-03** SHEET NO. **C4**



NOWAK & FRAUS ENGINEERS  
4677 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
TEL. (248) 332-7931  
FAX. (248) 332-8257  
WWW.NOWAKFRAUS.COM



Project: 4 Corners Outlot  
Date: 9-07-2021  
Revised:

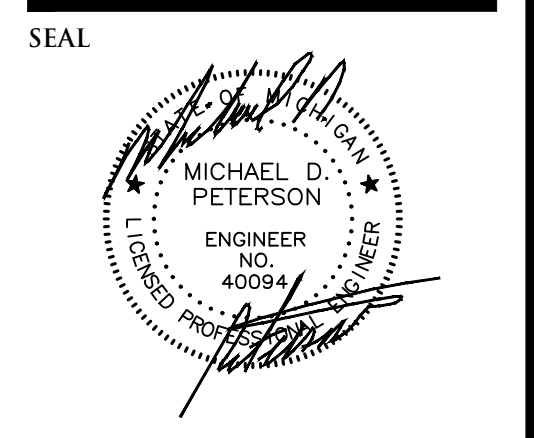
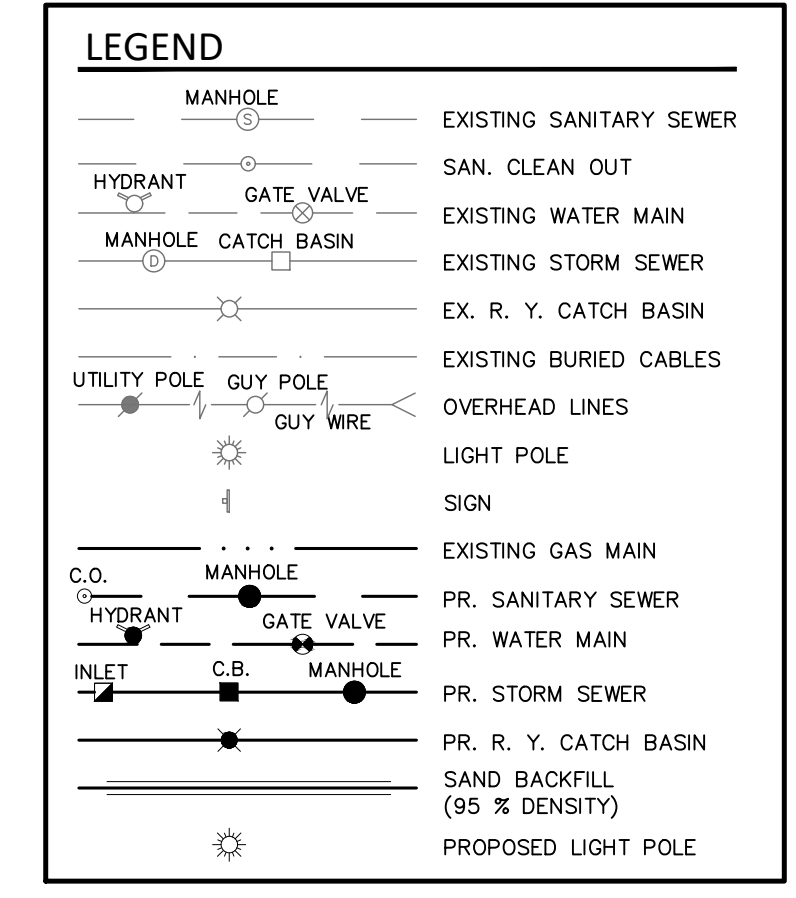
**SANITARY SEWER/WATER MAIN BASIS OF DESIGN**

<b>Retail</b>		
0.04 per 1,000 sq. ft.		
4,169 sq. ft. total		
0.04 x 4,169/1000 =		0.17 REU
<b>Total:</b>		0.17 Total REU
1 retail building with 4,169 sq. ft. total =		
*Note: 1 REU Equals 100 G.P.D.		
3.5 Persons per REU x Total REU =	0.5835	Persons Total
<b>Ave Q =</b> (100 GPD * 3.5 People * Total REU) / 1000000		6E-05 mgpd
<b>Peaking =</b> 18 + (# of Persons/1000) * 0.50		4.48
<b>Factor =</b> 4 + (# of Persons/1000) * 0.50		
<b>PEAK Q =</b> Ave Flow * Peaking Factor		0.0003 mgpd
		0.0004 cfs
<b>SIZE OF SANITARY SEWER</b>		6 inch
<b>PIPE SLOPE</b>		1.00 %
<b>PIPE CAPACITY</b>		0.56 cfs.

**WRC REU Table Assumptions:**  
Stores (other than specifically listed) = 0.04 REU per 1,000 sq. ft.

**ESTIMATED QUANTITIES**

DESCRIPTION	QUANTITY	UNITS
<b>STORM SEWER</b>		
6" PVC, SCH 40, SEWER PIPE	85	L.F.
CLEANOUT	5	EA.
TAP/CONNECTION	1	EA.
<b>SANITARY SEWER</b>		
6" PVC, SDR 23.5, BUILDING LEAD	52	L.F.
1,000 GALLON GREASE INTERCEPTOR	1	EA.
CLEANOUT	2	EA.
TAP/CONNECTION	1	EA.
<b>WATER MAIN</b>		
2" X" COPPER BUILDING SERVICE	24	L.F.
WATER MAIN CONNECTION	1	EA.



PROJECT  
4 Corners Retail Center  
1449 Union Lake Road  
White Lake Township

CLIENT  
VERITAS  
29580 Northwestern Hwy,  
Suite 1000  
Southfield, Michigan 48075

Contact: Shakir W. Alkafaji, President  
Phone: (248) 559-5555

PROJECT LOCATION  
Part of the E. 1/2 of the SE. 1/4 of Section 8 T.3N., R.8E. White Lake Township, Oakland County, Michigan

SHEET  
Utility Plan



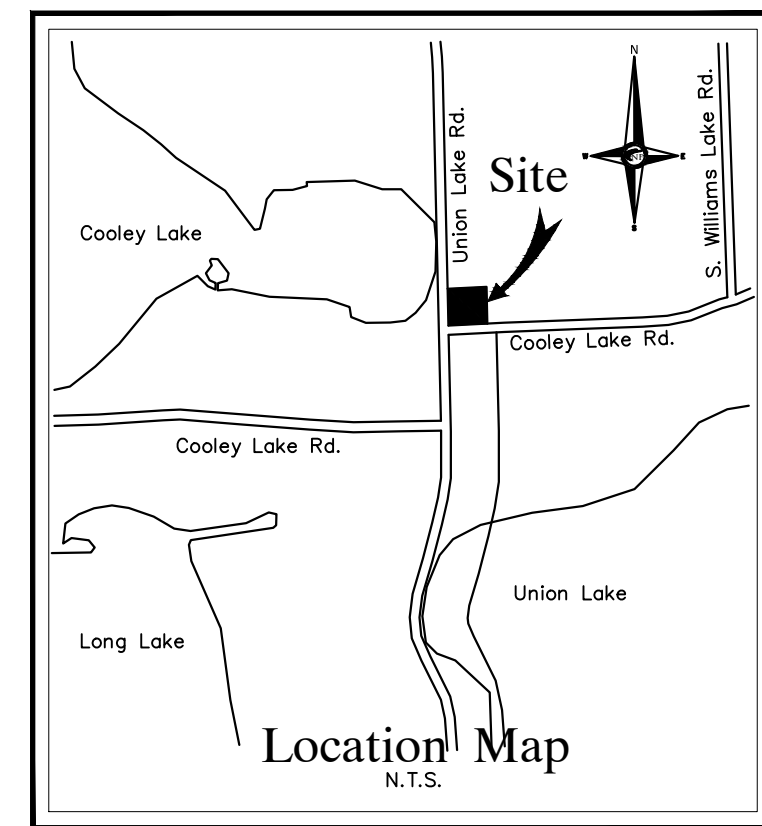
DATE ISSUED/REVISED  
10-14-21 ISSUED FOR SITE PLAN REVIEW  
11-08-21 REVISED PER SITE PLAN REVIEW

DRAWN BY:  
M. Kurmas  
DESIGNED BY:  
M. Kurmas  
APPROVED BY:  
M. Peterson

DATE:  
08-25-2021

SCALE: 1" = 10'  
10 5 0 5 10 5

NFE JOB NO. SHEET NO.  
J635-03 C5



NF ENGINEERS CIVIL ENGINEERS LAND SURVEYORS LAND PLANNERS NOWAK & FRAUS ENGINEERS 46777 WOODWARD AVE. PONTIAC, MI 48342-5032 TEL. (248) 332-7931 FAX. (248) 332-8257 WWW.NOWAKFRAUS.COM



Product Submittal Package For KSI HDPE GRAVITY GREASE/GRIT INTERCEPTOR

APPROVED BY: DATE:

Kennedy Solutions Inc. General Specification HDPE Gravity Grease/Grit Interceptor

The KSI Gravity Grease/Grit Interceptor (GI) unit shall be as manufactured by KSI (Kennedy Solutions, Inc.) (800) 669-4046. The GI shall remove oil and grease from the sanitary sewer line prior to discharge. The GI shall be installed underground as part of the sanitary sewer system and be structurally designed for (min. H-20) traffic loading at the surface. The GI shall be maintainable from the surface via access points. The GI shall be circular and constructed from HDPE material. The GI shall be designed and manufactured by KSI. Applicable specifications are AASHTO M294, ASTM F2306, ASTM F2649 and ASTM F894. Fusion welded joints shall be oil resistance, virtually water tight and meet the design criteria of DVS 2207. The GI unit shall be tested hydrostatically or vacuum pressure for water tightness. The difference between the inlet pipe elevation to the GI and the outlet pipe elevation from the GI should be minimized to allow installations into existing systems. The footprint of the GI shall be minimized to prevent conflicts with other piping and utilities. The GI is capable of containing floatable substances such as free oil (FOG) and settleable solids (grit) and not be compromised by temporary backwater conditions. The capabilities of the selected GI must be documented with scientific studies and reports. KSI will provide a manufacturers certificate of compliance for each KSI Gravity Grease/Grit Interceptor (owner, design engineer & municipal engineer/inspectors).

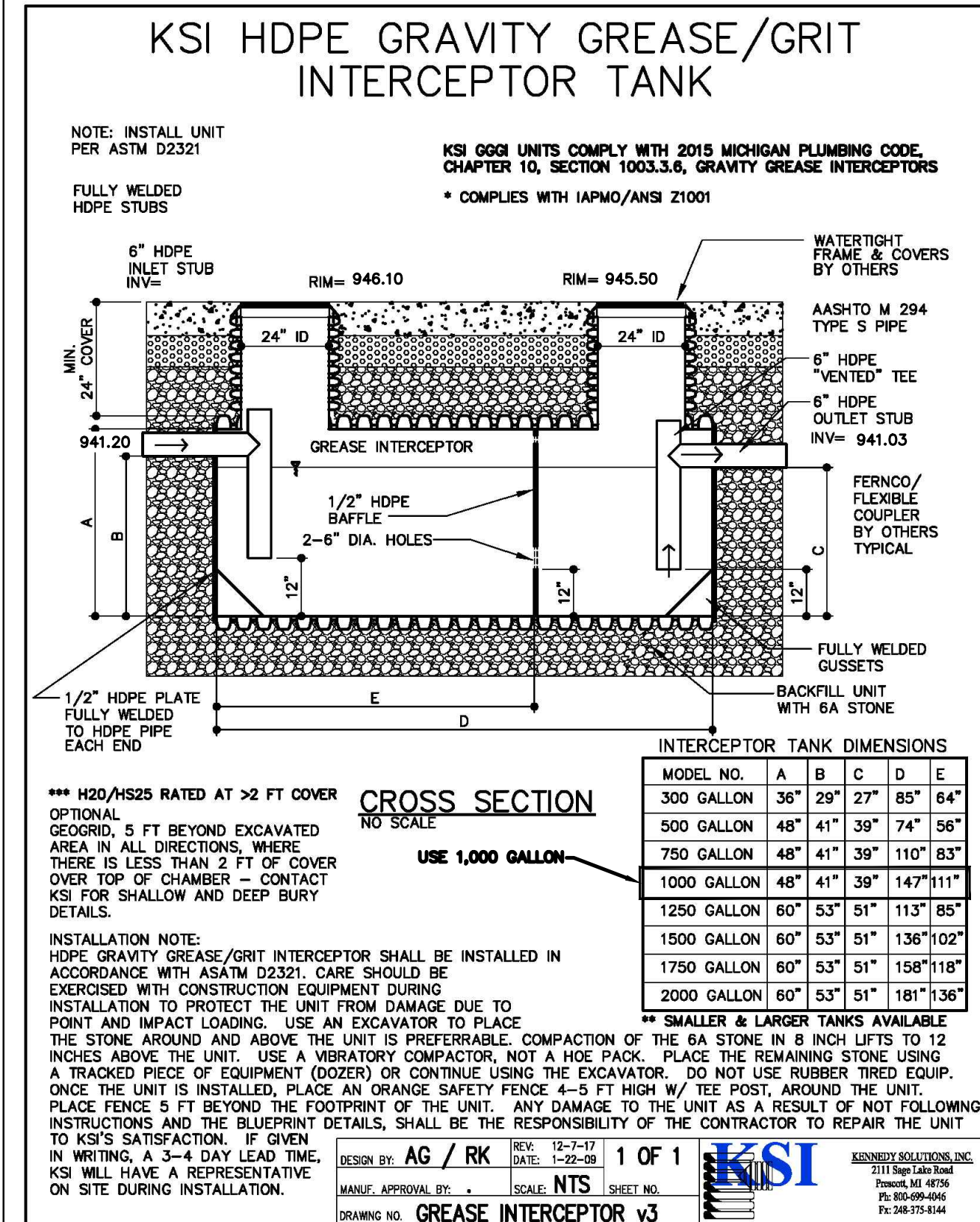
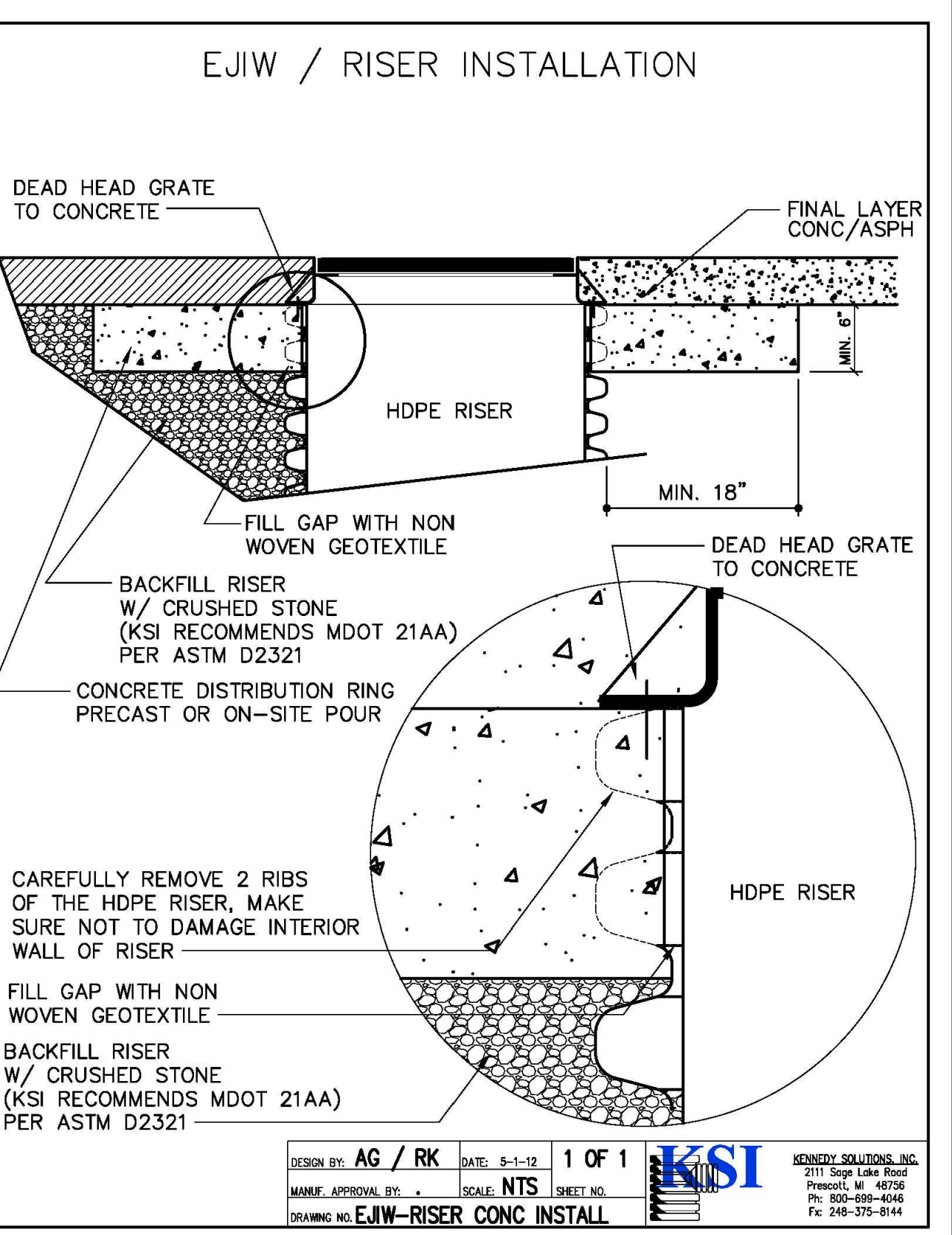
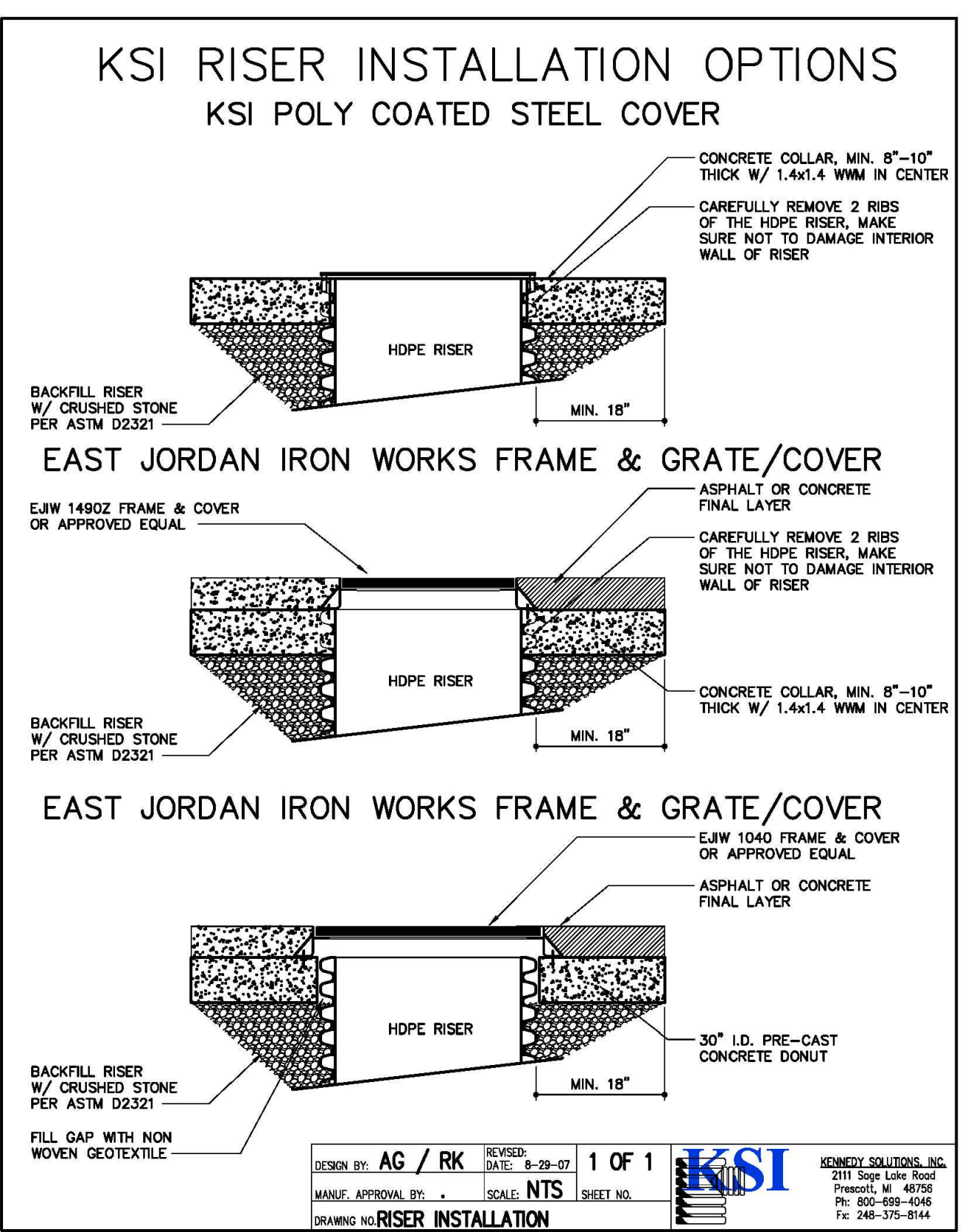
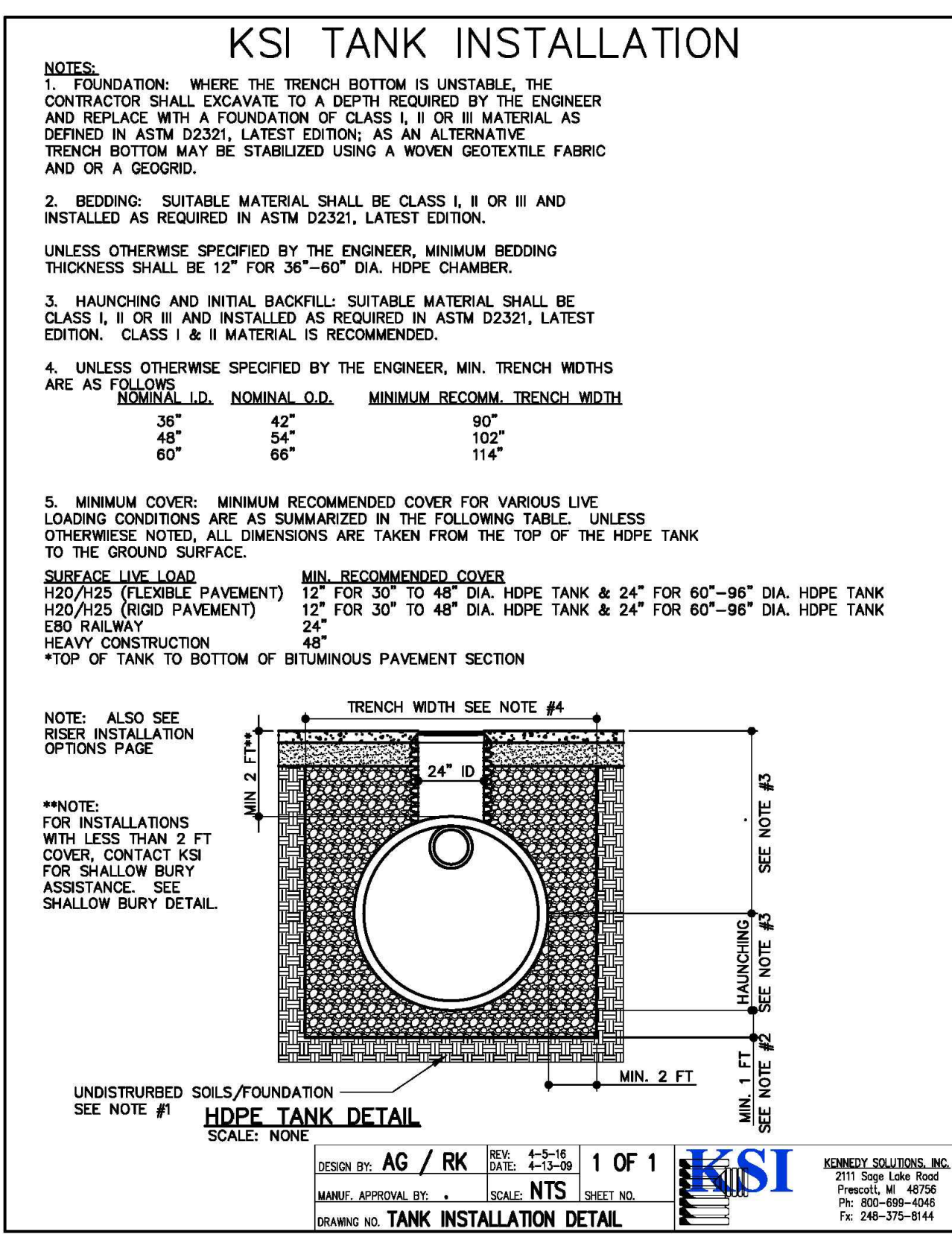


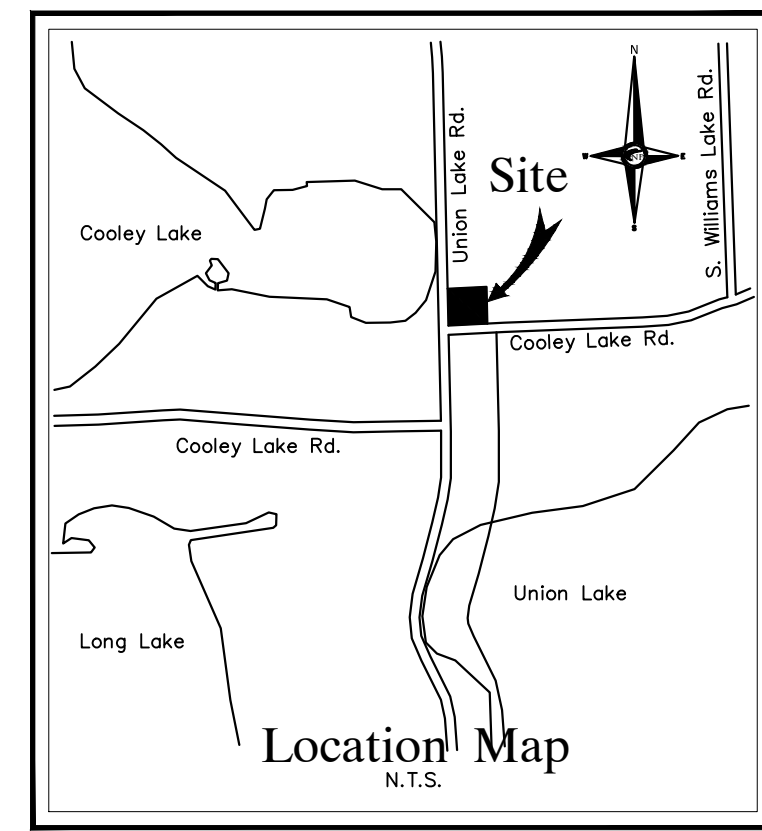
Table with columns: MODEL NO., A, B, C, D, E. Lists dimensions for various tank capacities from 300 to 2000 gallons.

KSI HDPE GRAVITY GREASE/GRIT INTERCEPTOR (GGGI) INSTALLATION AND MAINTENANCE GUIDELINES. INSTALLATION GUIDELINES: 1. EXCAVATE AREA FOR KSI HDPE GGGI AND PREPARE TANK/TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7. 2. THE KSI HDPE GGGI TANK SHALL BE INSTALLED ON A BED OF NO LESS THAN 12" CLASS I, CRUSHED STONE BEDDING COMPACTED TO 95% PROCTOR DENSITY. 3. BACKFILL GGGI UNIT WITH CLASS I, II OR III MATERIALS PER ASTM D 2321. CLASS I MATERIAL IS RECOMMENDED. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY. 4. THE HDPE ACCESS RISERS SHALL BE FIELD CUT TO FINISH GRADE BY THE CONTRACTOR. SEE RISER INSTALLATION OPTIONS PAGE. 5. KSI RECOMMENDS FILLING THE GGGI UNIT WITH WATER UPON COMPLETION OF INSTALLATION UP TO THE OUTLET HEIGHT. MAINTENANCE GUIDELINES: 1. ALL GREASE INTERCEPTOR TANKS WILL REQUIRE PERIODIC MAINTENANCE DEPENDING ON SPECIFIC SITE CONDITIONS. 2. KSI RECOMMENDS FREQUENT CLEANING THE GREASE INTERCEPTOR, WEEKLY, MONTHLY, QUARTERLY, ETC. AS DICTATED BY THE ESTABLISHMENTS NEEDS. THIS WILL BE BASED ON THE BUILDING WASTE EFFLUENT DISCHARGE CAPACITY AND CONCENTRATION. MATERIAL IS EASIER TO REMOVE WHEN IT IS REMOVED ON A REGULAR BASIS. 3. DISPOSAL OF MATERIAL FROM THE KSI GREASE INTERCEPTOR ARE SIMILAR TO THAT OF ANY OTHER BEST MANAGEMENT PRACTICES (BMP). LOCAL GUIDELINES SHOULD BE CONSULTED PRIOR TO DISPOSAL OF THE GREASE INTERCEPTOR CONTENTS. WASTE PRODUCTS SHOULD BE REMOVED BY A LICENSED WASTE MANAGEMENT COMPANY. 4. AFTER CLEANING THE UNIT - KSI RECOMMENDS REFILLING THE GGGI UNIT WITH WATER.

SEAL MICHAEL D. PETERSON ENGINEER NO. 400394 PROJECT 4 Corners Retail Center 1449 Union Lake Road White Lake Township CLIENT VERITAS 29580 Northwestern Hwy, Suite 1000 Southfield, Michigan 48075 Contact: Shakir W. Alkhafaji, President Phone: (248) 559-5555 PROJECT LOCATION Part of the E. 1/2 of the SE. 1/4 of Section 8 T.3N. , R.8E. White Lake Township, Oakland County, Michigan

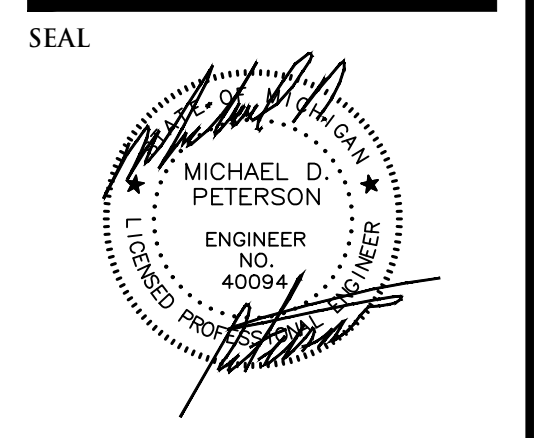


UTILITY DETAILS PLAN SHEET DATE ISSUED/REVISED 10-14-21 ISSUED FOR SITE PLAN REVIEW 11-08-21 REVISED PER SITE PLAN REVIEW DRAWN BY: M. Kurmas DESIGNED BY: M. Kurmas APPROVED BY: M. Peterson DATE: 08-25-2021 SCALE: N.T.S. NFE JOB NO. 1635-03 SHEET NO. C6



**NF ENGINEERS**  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
 4677 WOODWARD AVE.  
 PONTIAC, MI 48342-5032  
 TEL. (248) 332-7931  
 FAX. (248) 332-8257  
 WWW.NOWAKFRAUS.COM



PROJECT  
 4 Corners Retail Center  
 1449 Union Lake Road  
 White Lake Township

CLIENT  
 VERITAS  
 29580 Northwestern Hwy,  
 Suite 1000  
 Southfield, Michigan 48075

Contact: Shakir W. Alkhafaji, President  
 Phone: (248) 559-5555

PROJECT LOCATION  
 Part of the E. 1/2 of the SE. 1/4 of Section 8  
 T.3N., R.8E.  
 White Lake Township,  
 Oakland County, Michigan

SHEET  
 Soil Erosion Control /  
 Drainage Area Plan



DATE ISSUED/REVISED  
 10-14-21 ISSUED FOR SITE PLAN REVIEW  
 11-08-21 REVISED PER SITE PLAN REVIEW

DRAWN BY:  
 N. Naoum

DESIGNED BY:  
 M. Kurmas

APPROVED BY:  
 M. Peterson

DATE:  
 08-25-2021

SCALE: 1" = 20'

NFE JOB NO. SHEET NO.  
**J635-03 C7**

**SEE OAKLAND COUNTY WRC SOIL EROSION AND SEDIMENTATION CONTROL STANDARD DETAILS**

CONSTRUCTION SEQUENCE / TIMING SCHEDULE	
1. INSTALL PERIMETER FILTER FABRIC FENCING AND STONE FILTER WHERE REQUIRED.	OCTOBER 2021
2. MASS GRADE SITE.	OCTOBER 2021
3. COMMENCE UNDERGROUND UTILITY WORK.	NOVEMBER 2021
4. INSTALL INLET FILTERS ON PROPOSED DRAINAGE STRUCTURES.	NOVEMBER 2021
5. FILL IN SEDIMENTATION TRAPS AND PAVE SITE.	MARCH 2022
6. COMPLETE ALL BUILDINGS AND LANDSCAPE ACTIVITY.	MARCH 2022
7. JET VAC NEW STORM SEWER SYSTEM AS REQUIRED.	MAY 2022
8. REMOVE ALL TEMPORARY SOIL EROSION MEASURES.	MAY 2022

**NOTES**

REFER TO THE WRC SOIL EROSION AND SEDIMENTATION CONTROL DETAIL SHEET FOR ALL ADDITIONAL NOTES & DETAILS (TYP)

A DISTANCE OF 66' TO THE NEAREST BODY OF WATER IS COOLEY LAKE.

THE TOTAL AREA OF EARTH DISRUPTION IS 0.22 ACRES.

THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE CONTRACTOR

A SOIL EROSION PERMIT IS REQUIRED FROM THE OAKLAND COUNTY COUNTY.

**SOIL DATA**

THIS SITE CONSISTS OF  
 15C--SPINKS LOAMY SAND, 6 TO 12 PERCENT SLOPES  
 5B--URBAN LAND

BASED ON DATA PROVIDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE.

**ESTIMATED QUANTITIES**

DESCRIPTION	QUANTITY	UNITS
SILT FABRIC FENCING	199	L.F.
SILT SACK OR EQUAL	6	EA.
SOIL EROSION CONTROL BLANKET	105	S.Y.

**LEGEND**

	INDICATES LIMITS OF SILT FABRIC FENCE
	INDICATES LIMITS OF DRAINAGE DISTRICT AREA
	INDICATES LIMITS OF SOIL DISRUPTION
	INDICATES LOW POINT INLET FILTER OR PROPOSED DRAINAGE STRUCTURE
	INDICATES SILT SACK OR EQUAL ON EXISTING DRAINAGE STRUCTURE
	INDICATES DRAINAGE DISTRICT AREA

AREA A  
 0.00 ACRE

**SOIL EROSION CONTROL**

CUTTING, FILLING AND GRADING SHALL BE MINIMIZED AND THE NATURAL TOPOGRAPHY OF THE SITE SHALL BE PRESERVED TO THE MAXIMUM POSSIBLE EXTENT, EXCEPT WHERE SPECIFIC FINDINGS DEMONSTRATE THAT MAJOR ALTERATIONS WILL STILL MEET THE PURPOSES AND REQUIREMENTS OF THIS ORDINANCE.

DEVELOPMENT SHALL BE STAGED TO KEEP THE EXPOSED AREAS OF SOIL AS SMALL AS PRACTICABLE.

SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED BETWEEN THE DISTURBED AREA AND ANY WATERCOURSES, INCLUDING RIVERS, STREAMS, CREEKS, LAKES, PONDS AND OTHER WATERCOURSES, WETLANDS, OR ROADWAYS ON OR NEAR THE SITE.

SEDIMENT RESULTING FROM ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE THAT WATER LEAVES THE SITE.

TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR AWAY FROM THE SITE SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.

TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE REMOVED AFTER PERMANENT SOIL EROSION CONTROL MEASURES HAVE BEEN IMPLEMENTED. ALL SITES SHALL BE STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES.

IF LAKES, PONDS, CREEKS, STREAMS, OR WETLANDS ARE LOCATED ON OR NEAR THE SITE, EROSION CONTROL MEASURES WHICH DIVERT RUNOFF AND TRAP SEDIMENT MUST BE PROVIDED AT STRATEGIC LOCATIONS. STRAW BALE BERMS MAY BE USED AS TEMPORARY STORMWATER DIVERSION STRUCTURES, BUT WILL NOT BE CONSIDERED SUFFICIENT FOR TRAPPING SEDIMENT. THE USE OF SEDIMENT BASINS, FILTER FABRIC, VEGETATED BUFFER STRIPS, AND ROCK FILTERS IN LIEU OF STRAW BALE BERMS SHALL BE STRONGLY ENCOURAGED. OTHER MEASURES MAY BE REQUIRED IF REASONABLY DETERMINED TO BE NECESSARY TO PROTECT A WATERCOURSE OR WETLAND.

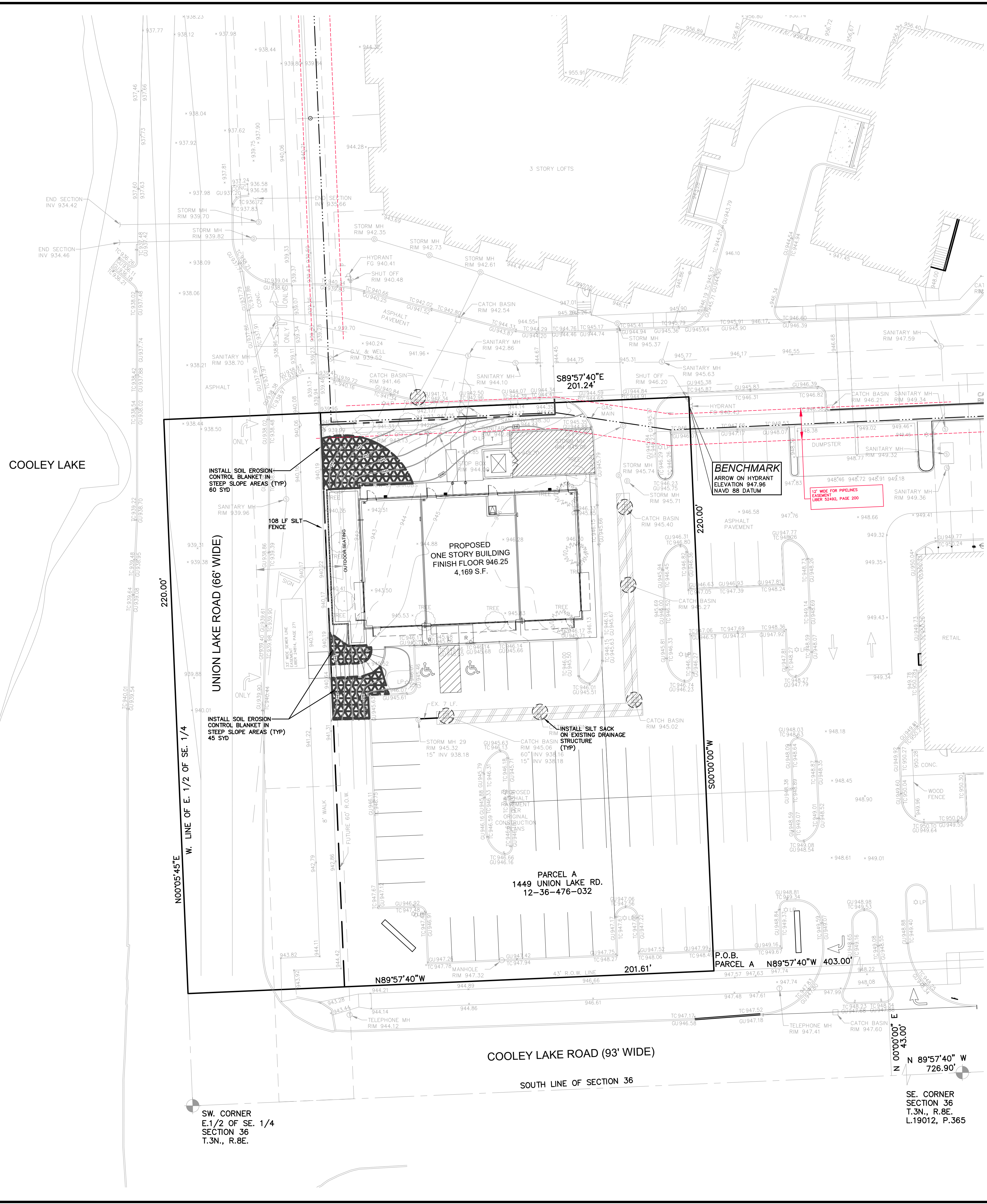
WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHEN SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED.

PERMANENT EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 (FIFTEEN) CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.

VEGETATED BUFFER STRIPS SHALL BE CREATED OR RETAINED ALONG THE EDGES OF ALL LAKES, PONDS, CREEKS, STREAMS, OTHER WATERCOURSES, OR WETLANDS.

EROSION AND SEDIMENTATION CONTROL MEASURES SHALL RECEIVE REGULAR MAINTENANCE TO ASSURE PROPER FUNCTIONING.

ALL GRADING PLANS AND SPECIFICATIONS, INCLUDING EXTENSIONS OF PREVIOUSLY APPROVED PLANS, SHALL INCLUDE PROVISIONS FOR EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE STANDARDS CONTAINED IN THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", PUBLISHED BY THE OAKLAND SOIL CONSERVATION DISTRICT.



COOLEY LAKE

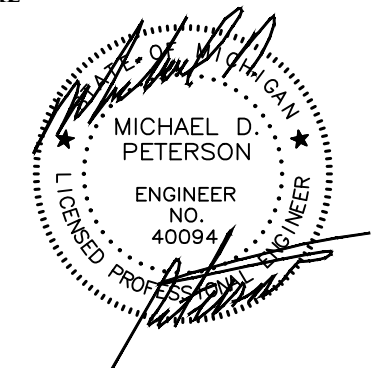
SW CORNER E.1/2 OF SE. 1/4 SECTION 36 T.3N., R.8E.

SE CORNER SECTION 36 T.3N., R.8E. L.19012, P.365



NOWAK & FRAUS ENGINEERS 46777 WOODWARD AVE. PONTIAC, MI 48342-5032 TEL. (248) 332-7931 FAX. (248) 332-8257 WWW.NOWAKFRAUS.COM

SEAL



PROJECT

4 Corners Retail Center 1449 Union Lake Road White Lake Township

CLIENT

VERITAS 29580 Northwestern Hwy, Suite 1000 Southfield, Michigan 48075

Contact: Shkir W. Alkhafaji, President Phone: (248) 559-5555

PROJECT LOCATION

Part of the E. 1/2 of the SE. 1/4 of Section 8 T.3N., R.8E. White Lake Township, Oakland County, Michigan

SHEET

General Construction Requirements, Contractor's Duties, Notes and Details



Know what's below Call before you dig.

DATE ISSUED/REVISED

10-14-21 ISSUED FOR SITE PLAN REVIEW 11-08-21 REVISED PER SITE PLAN REVIEW

DRAWN BY:

M. Kurmas

DESIGNED BY:

M. Kurmas

APPROVED BY:

M. Peterson

DATE:

08-25-2021

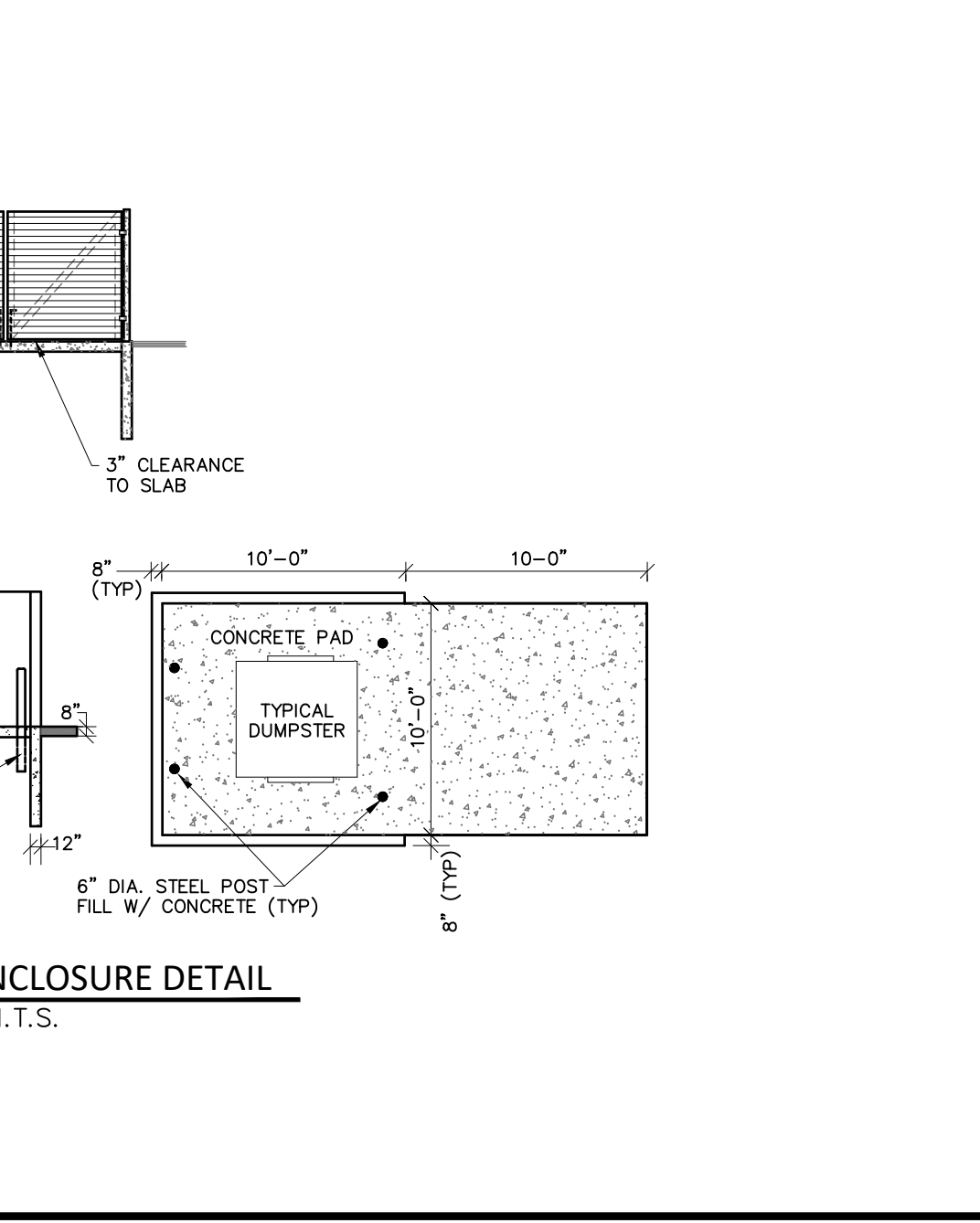
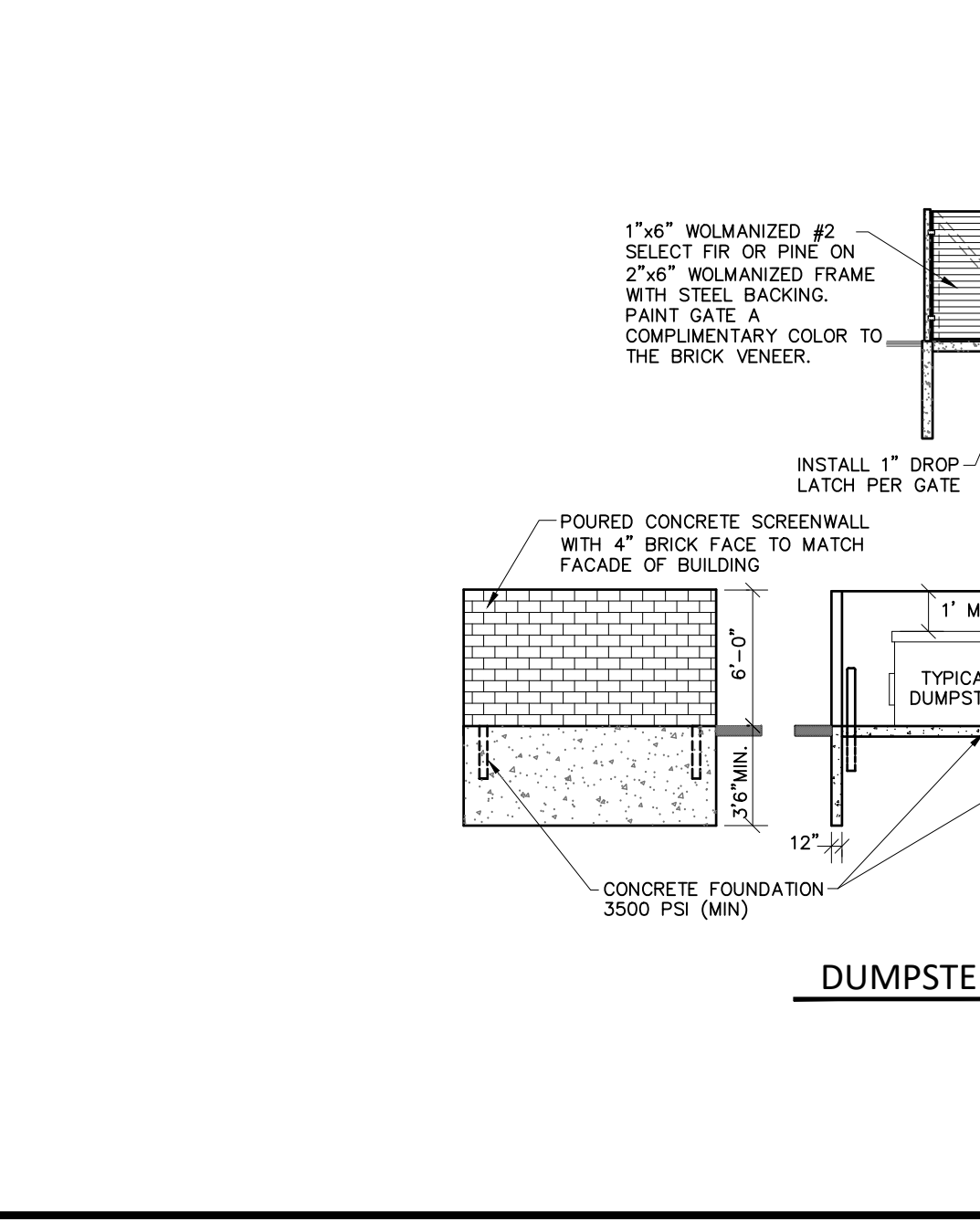
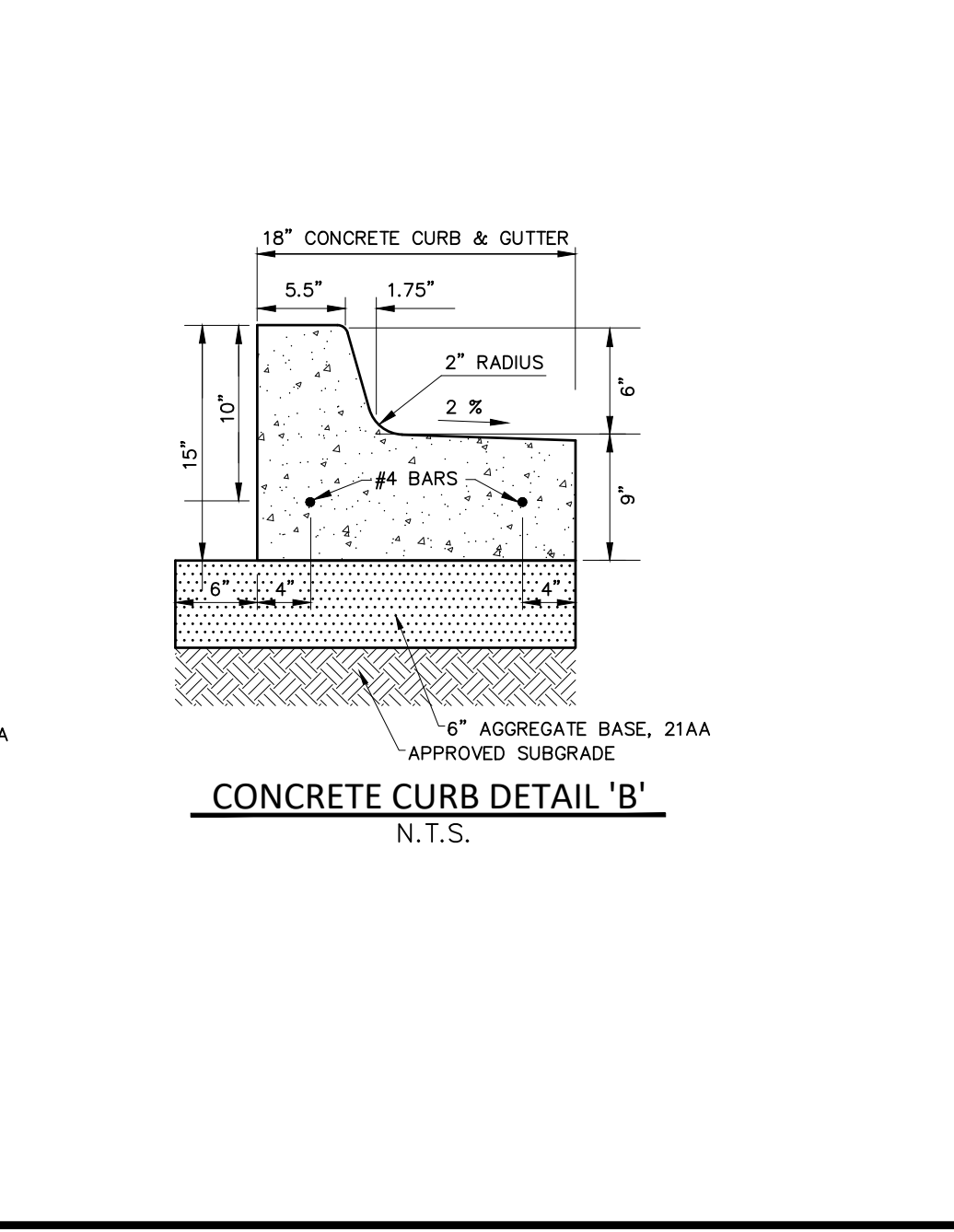
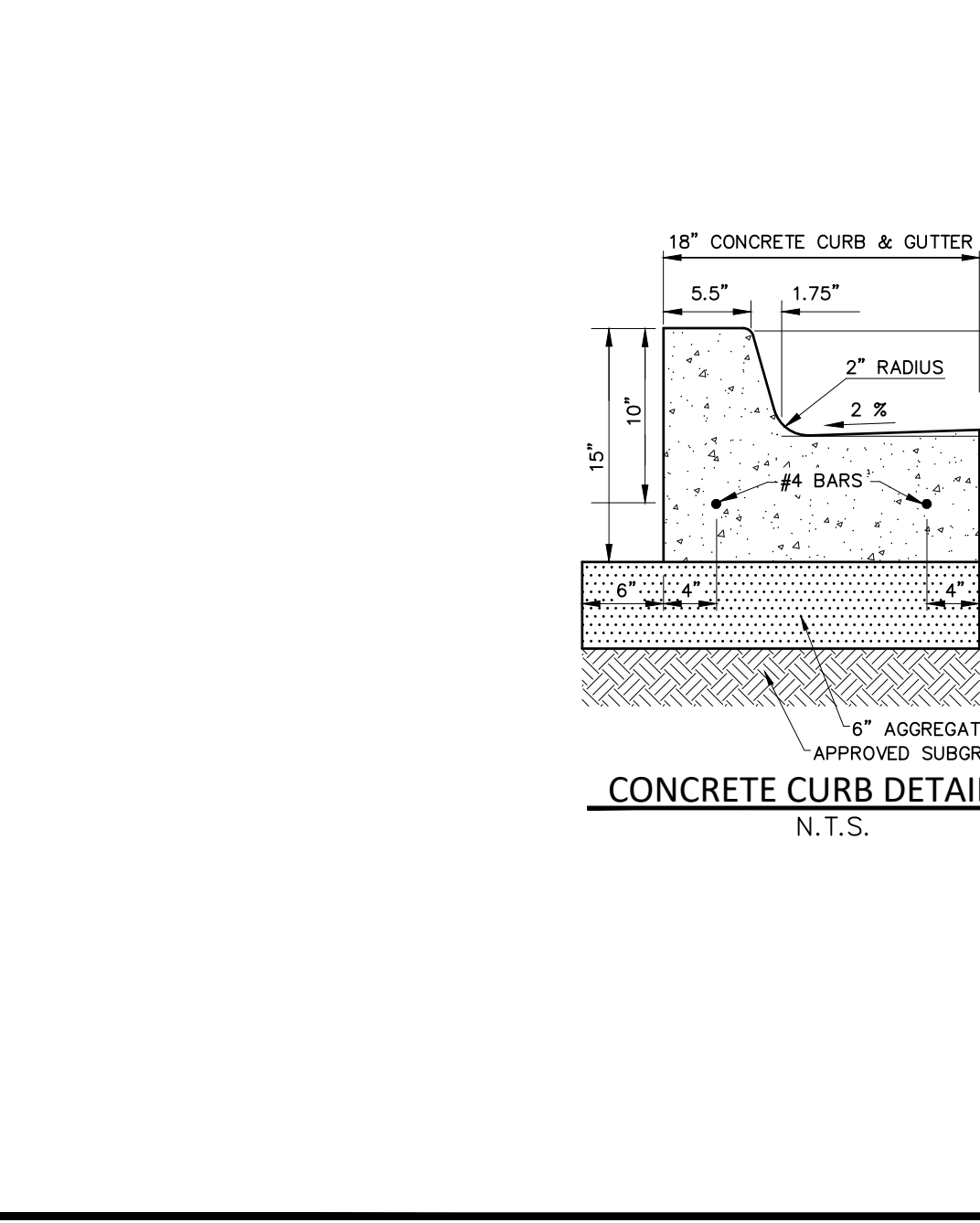
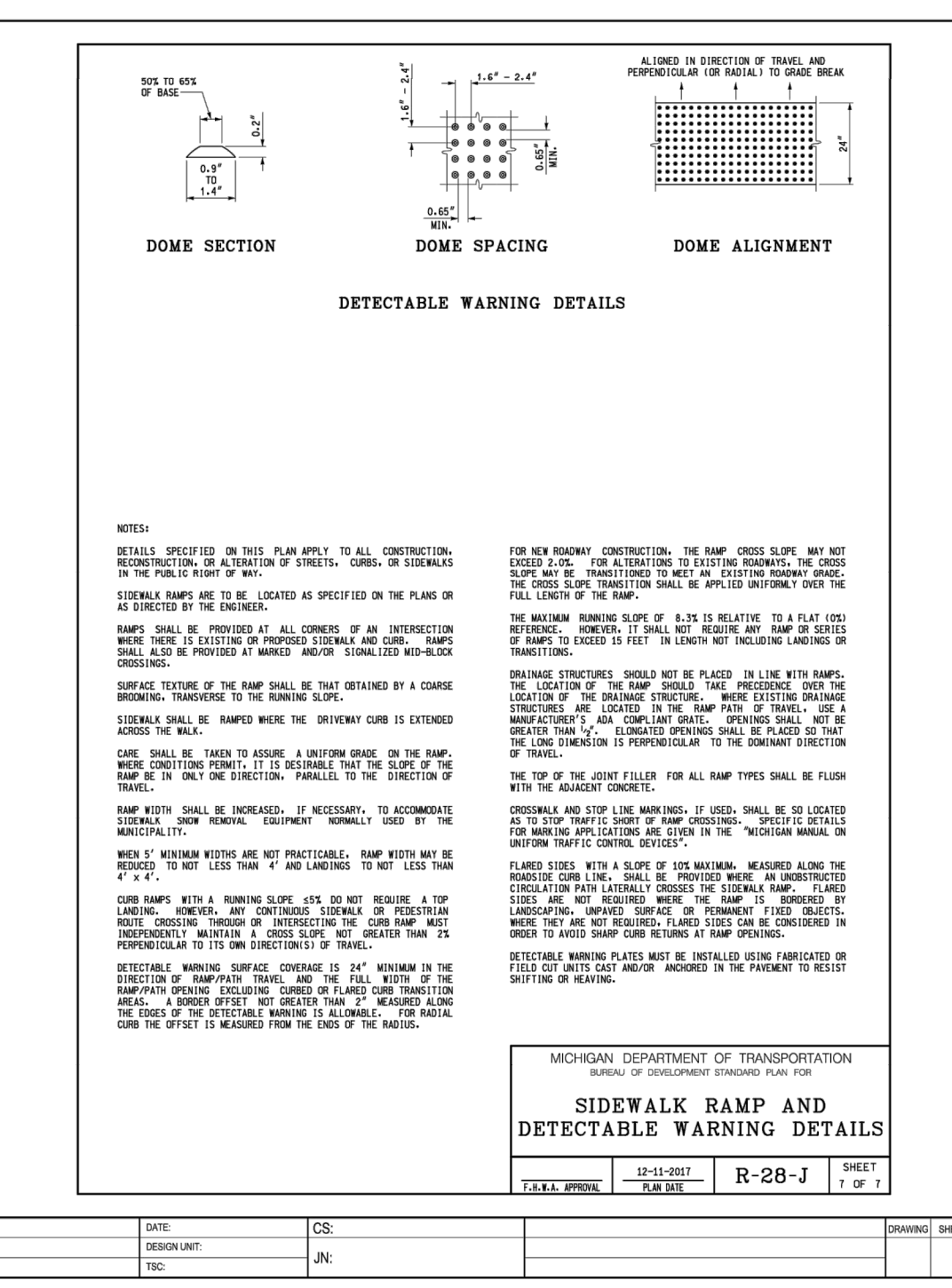
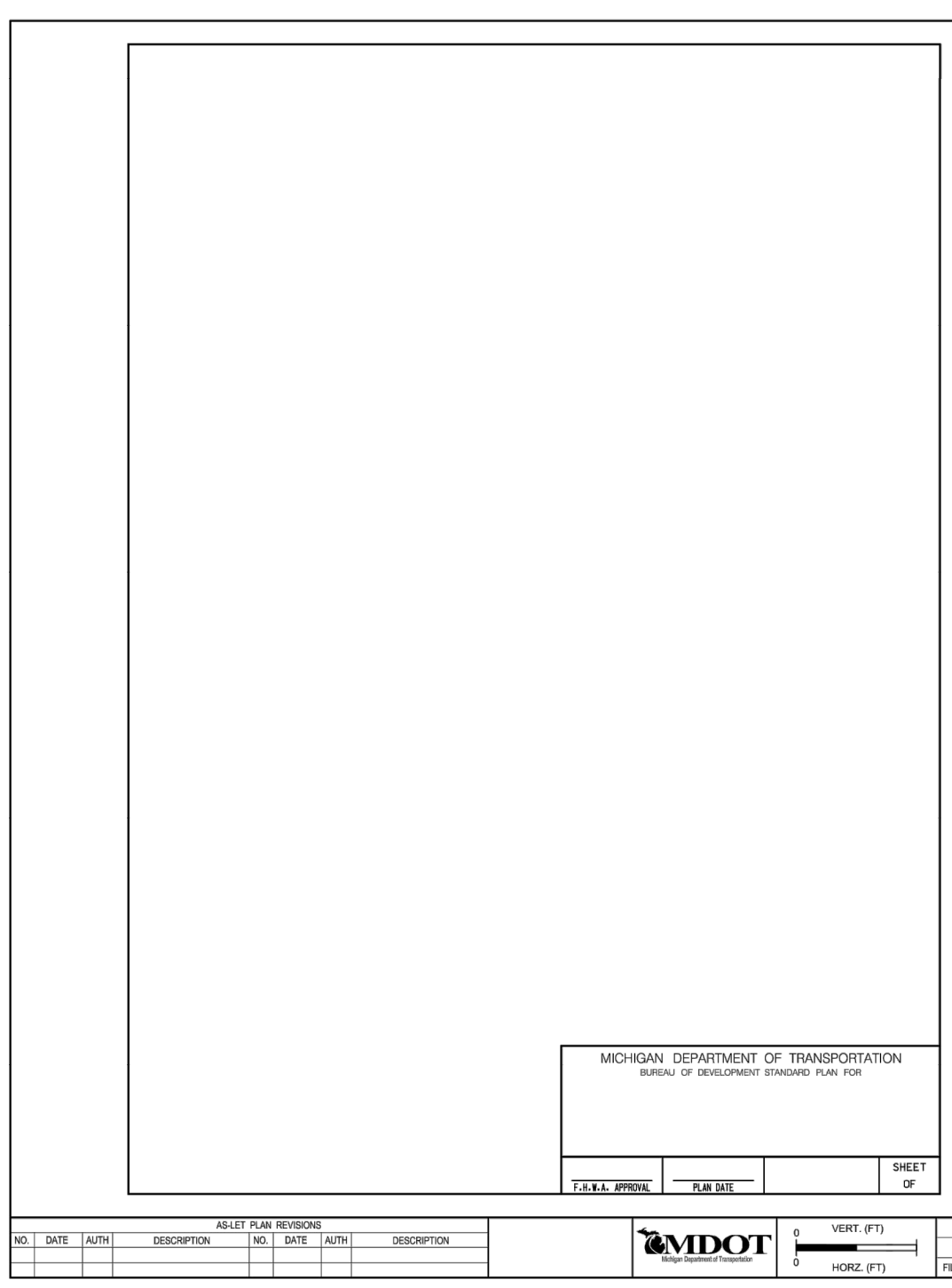
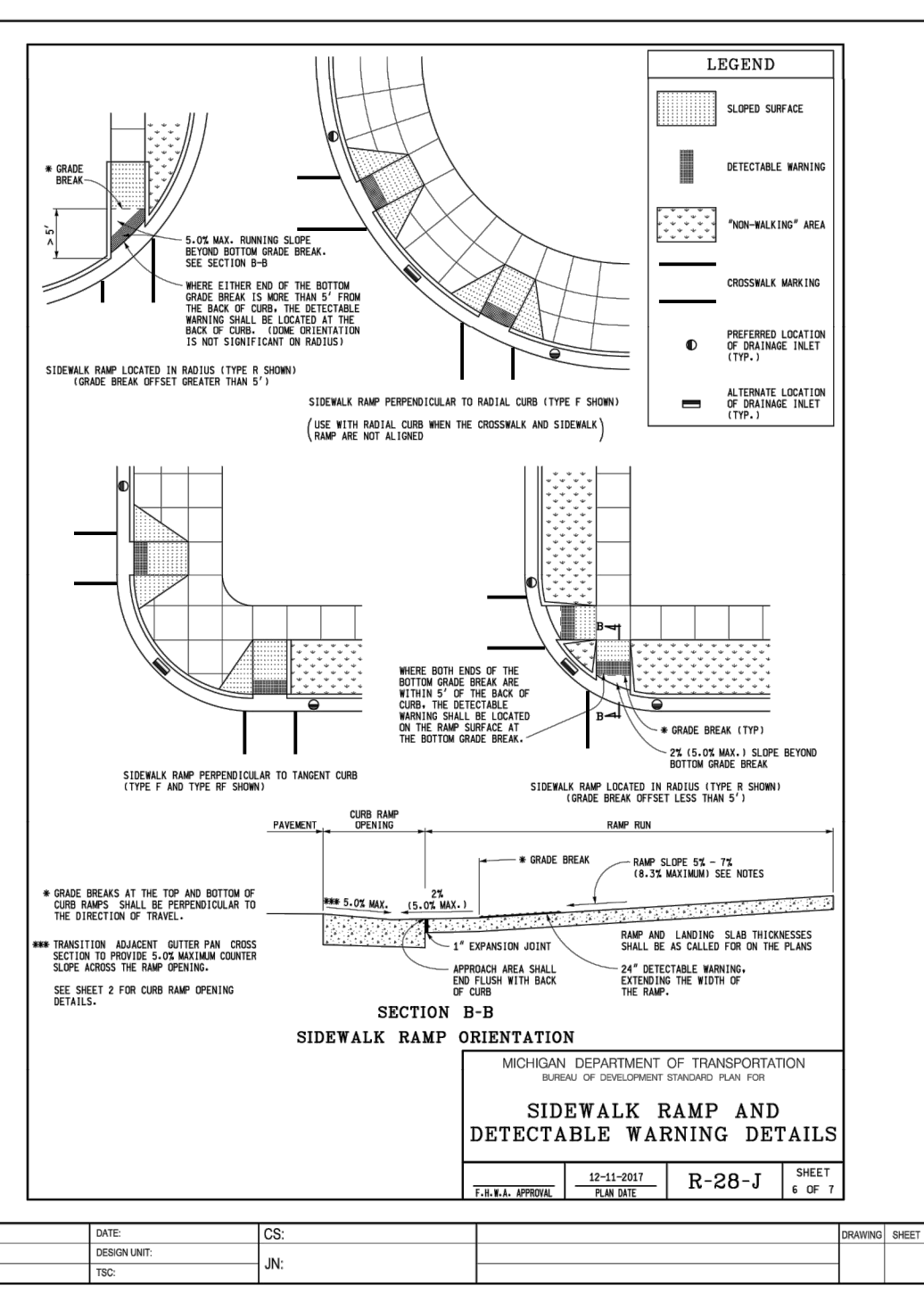
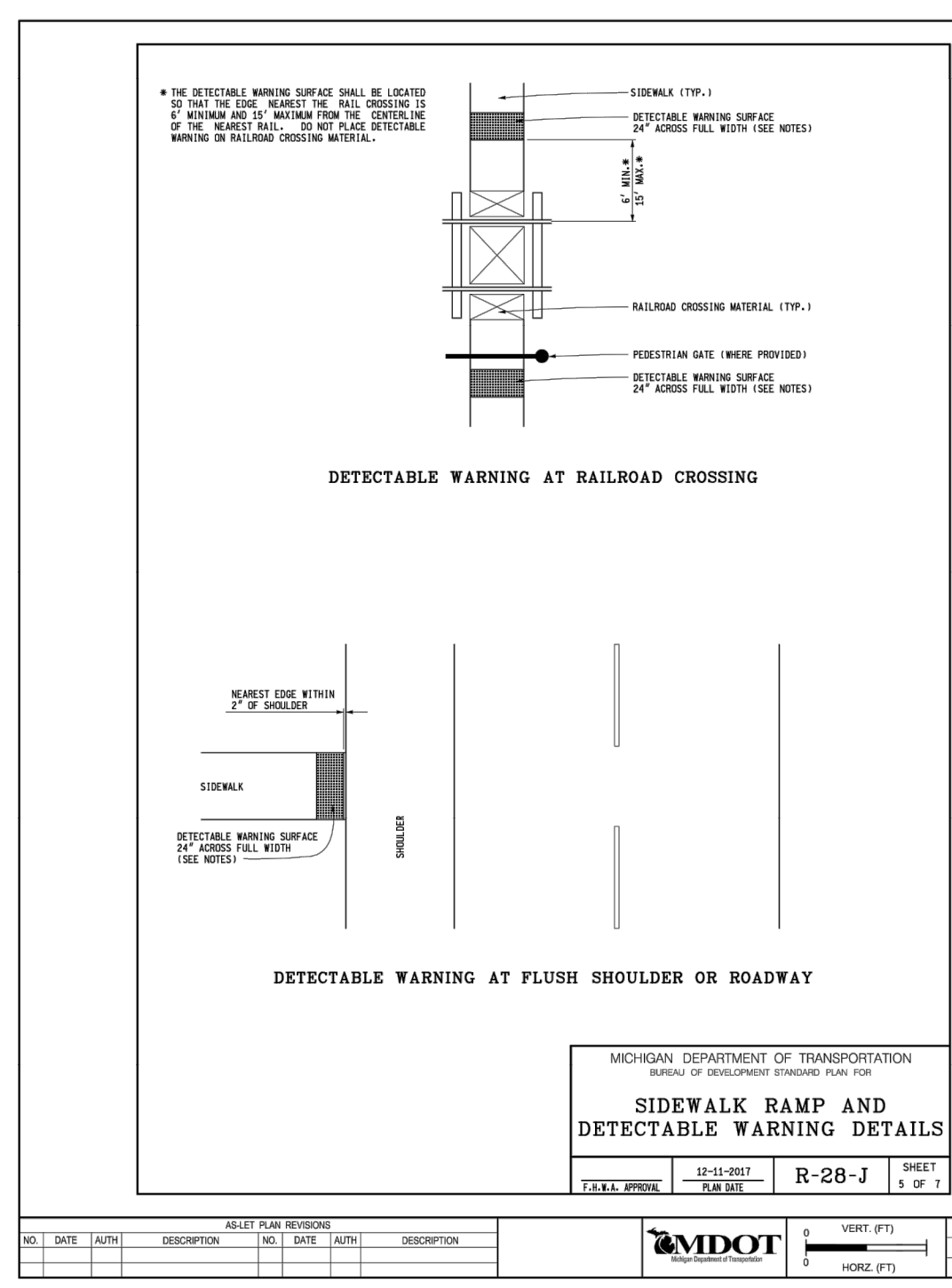
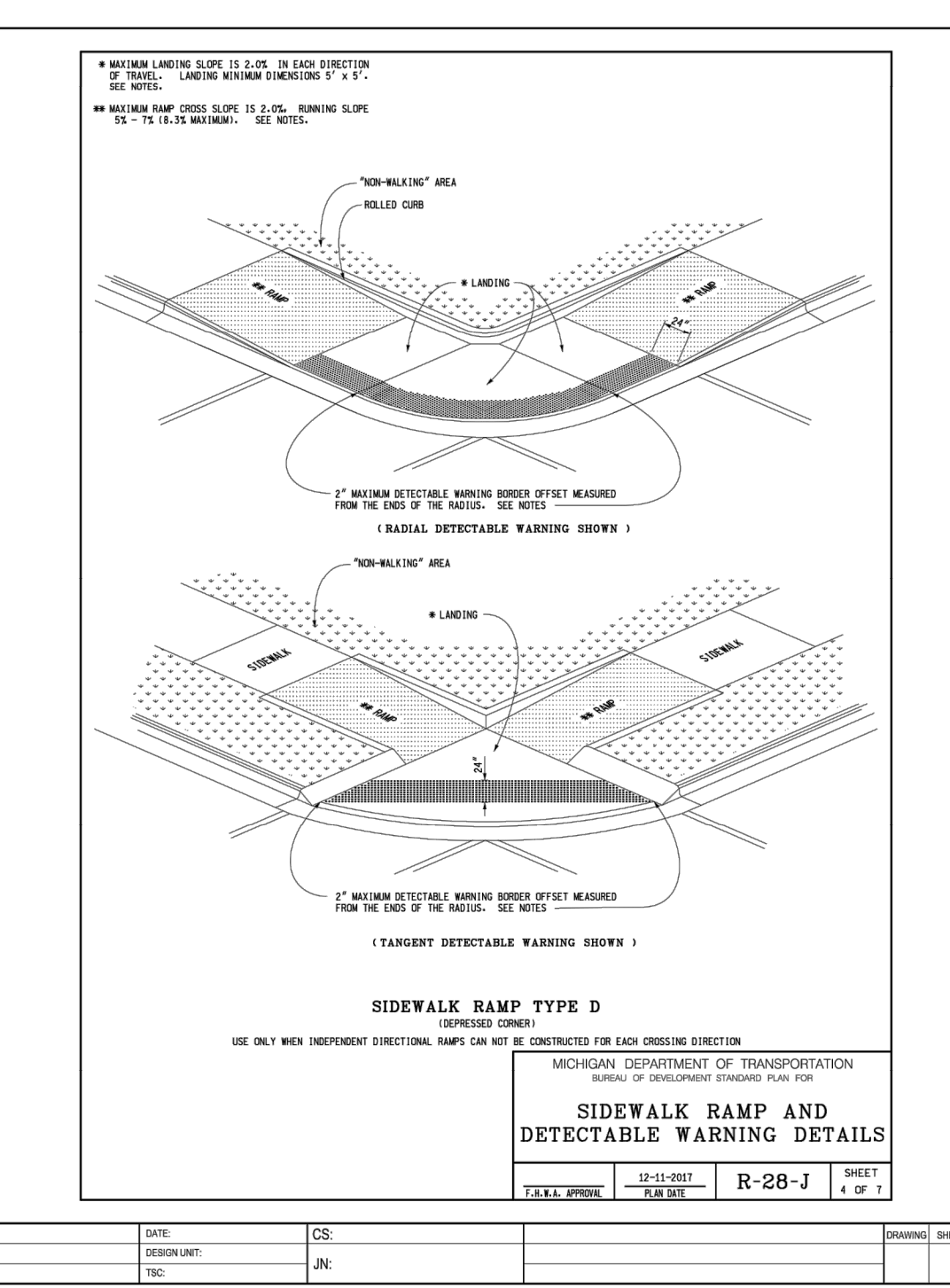
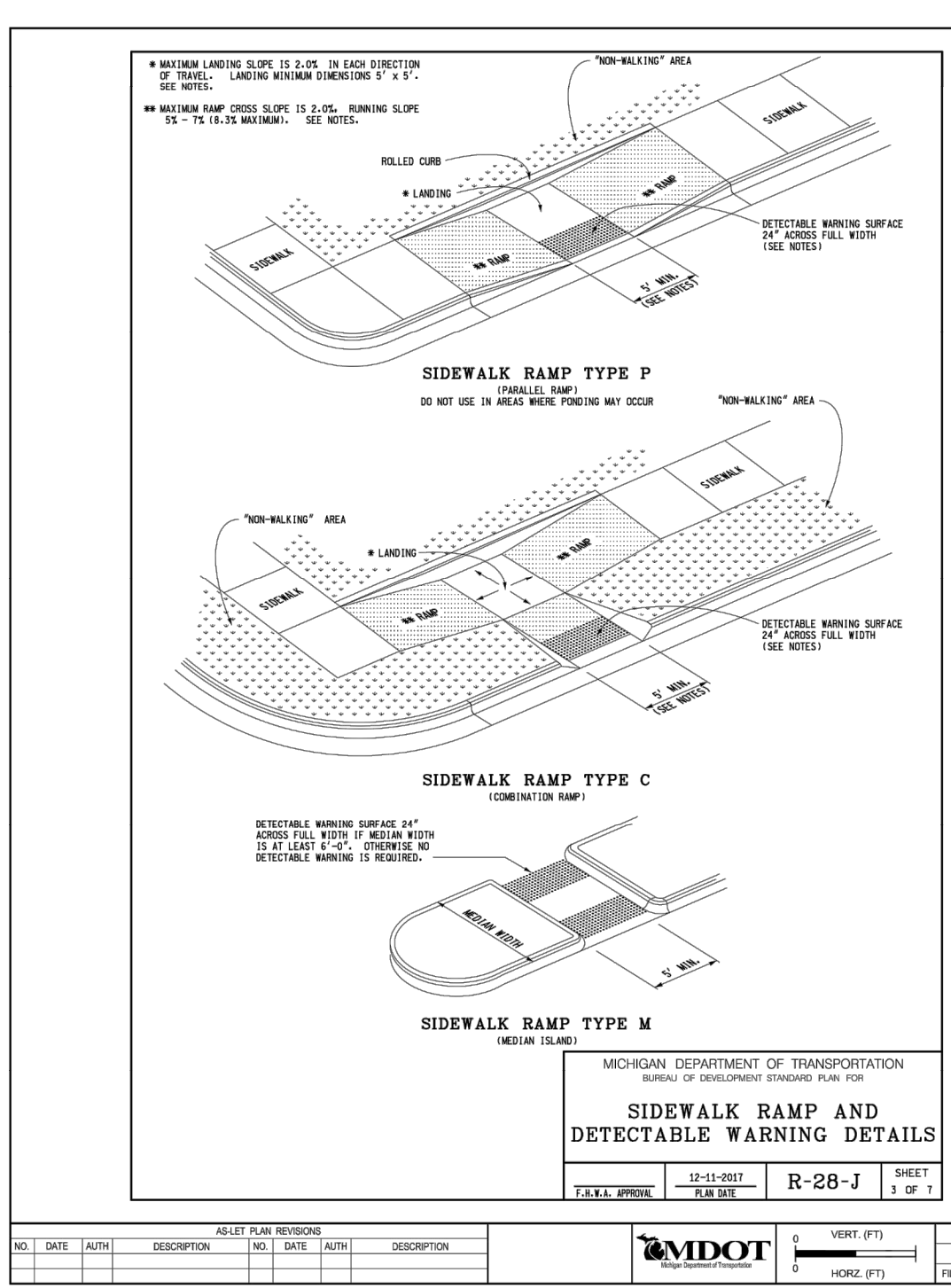
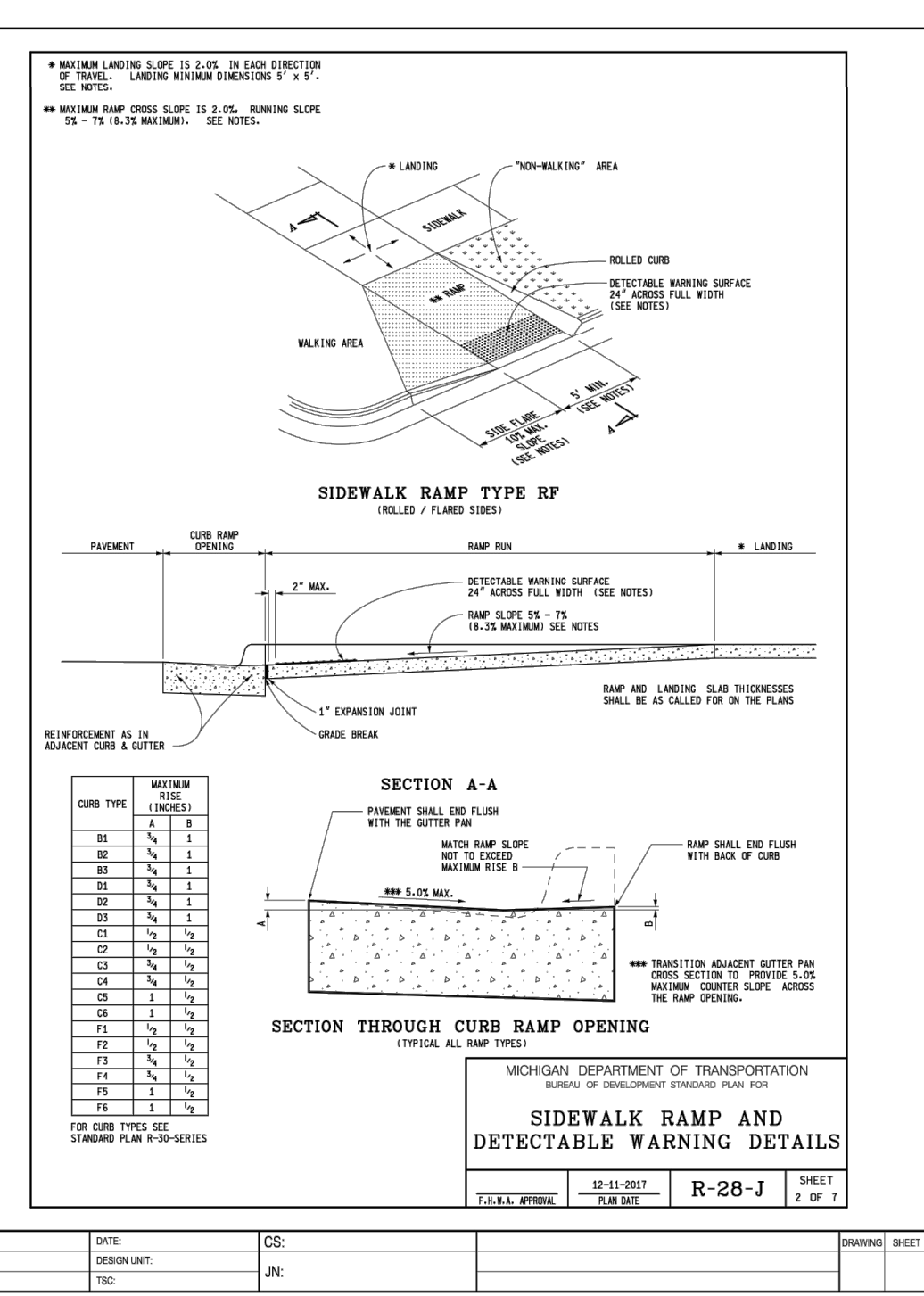
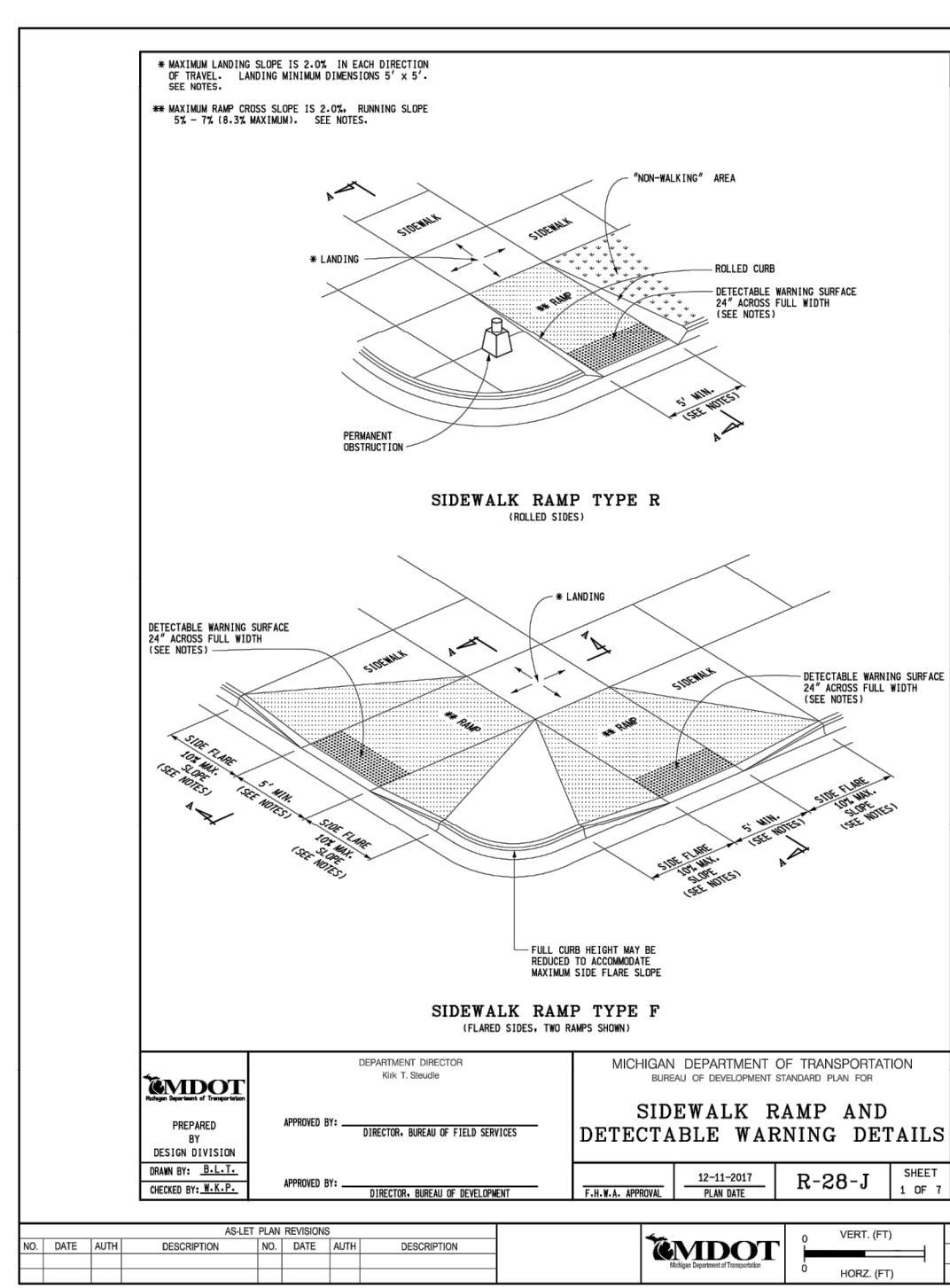
SCALE: N.T.S.

NFE JOB NO.

J635-03

SHEET NO.

C8



UTILITIES AT LEAST 72 HOURS (3 WORKING DAYS) PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY MISS DIG AND THE LOCAL COMMUNITY (WHERE APPLICABLE) TO STAKE LOCATIONS OF EXISTING UTILITIES.

THE CONTRACTOR SHALL EXPOSE AND VERIFY EXISTING UTILITIES FOR LOCATION, SIZE, DEPTH, MATERIAL AND CONFIGURATION PRIOR TO CONSTRUCTION. COSTS FOR EXPLORATORY EXCAVATION IS AN INCIDENTAL COST AND SHALL NOT BE CONSIDERED AN EXTRA TO THE CONTRACT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY EXISTING UTILITIES WHICH DO NOT MATCH THE PLANS AND SPECIFICATIONS PRIOR TO COMMENCING WORK. ANY FIELD CHANGES OF THE PROPOSED UTILITIES SHALL BE APPROVED BY THE OWNER AND ENGINEER BEFORE THE WORK IS DONE.

THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE. ANY SERVICE OR UTILITY DAMAGED OR REMOVED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR, IN CONFORMANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY PROVIDER.

DEWATERING OF TRENCH AND EXCAVATIONS IF NOT SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION DESIGN DOCUMENTS, THE DESIGN OR QUALITATIVE ANALYSIS OF GROUND WATER FOR INFORMATIONAL PURPOSES IS BEYOND THE SCOPE OF DESIGN FOR THESE DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND PROVIDING APPROPRIATE EXCAVATION DEWATERING SYSTEMS FOR USE DURING CONSTRUCTION.

DEWATERING METHOD SELECTED BY THE CONTRACTOR WILL NOT ADVERSELY AFFECT ADJACENT PAVEMENTS OR STRUCTURES PRIOR TO BEGINNING DEWATERING CONDITIONS. MEANS AND METHODS OF DEWATERING ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF DEWATERING IS INCLUDED IN THE WORK OF CONSTRUCTING THE UNDERGROUND UTILITIES UNLESS SPECIFICALLY INDICATED OTHERWISE.

BY-PASS PUMPING FROM TIME TO TIME IT MAY BE NECESSARY FOR THE CONTRACTOR TO BY-PASS PUMP TO COMPLETE THE WORK INDICATED ON THE PLANS. THE COST OF BY-PASS PUMPING, THE METHODS, EQUIPMENT AND MEANS OF PROVIDING THAT WORK ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED PART OF THE WORK WHETHER SPECIFICALLY CALLED OUT ON THE PLANS OR NOT.

MEANS AND METHODS FOR PIPE CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MEANS AND METHODS FOR CONSTRUCTING THE UNDERGROUND PIPE SYSTEMS PROPOSED ON THE PLANS, INCLUDING BUT NOT LIMITED TO THE NEED FOR SHORING/BRACING OF TRENCHES, DEWATERING OF TRENCHES, SCHEDULING THE WORK AT OFF-PEAK HOURS, AND/OR MAINTAINING EXISTING FLOWS THAT MAY BE ENCOUNTERED VIA PUMPING, BY-PASS PIPING OR OTHER MEANS. THE CONTRACTOR SHALL NOT BE PAID ANY ADDITIONAL COMPENSATION TO IMPLEMENT ANY MEANS AND METHODS TO SATISFACTORILY COMPLETE THE CONSTRUCTION.

PAVEMENT REMOVAL THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE THICKNESS OF THE PAVEMENT REMOVAL. PAVEMENT CORE SAMPLES ARE FOR INFORMATIONAL PURPOSES ONLY AS TO THE THICKNESS OF THE PAVEMENT AT THE LOCATION OF THE SAMPLE. THE OWNER AND ENGINEER MAKE NO REPRESENTATION, WARRANTY OR GUARANTEE THAT THE SAMPLES ACCURATELY REFLECT THE PAVEMENT THICKNESS ON THE PROJECT.

MAINTENANCE OF TRAFFIC DURING THE PROGRESS OF THE WORK THE CONTRACTOR SHALL ACCOMMODATE BOTH VEHICULAR AND PEDESTRIAN RIGHT OF WAY. THE CONTRACTOR'S EQUIPMENT AND OPERATIONS ON PUBLIC STREETS SHALL BE GOVERNED BY ALL APPLICABLE LOCAL, COUNTY AND STATE ORDINANCES, REGULATIONS AND LAWS. THE CONTRACTOR SHALL OBTAIN AND SATISFY ANY AND ALL PERMIT REQUIREMENTS BY THE LOCAL, COUNTY AND STATE GOVERNMENTAL AGENCIES.

IRRIGATION THE CONTRACTOR SHALL MAINTAIN OR REPAIR ANY EXISTING IRRIGATION SYSTEMS WITHIN THE PROJECT AREA UNLESS THE DRAWING CALLS FOR THE IRRIGATION SYSTEM TO BE REMOVED. THE OWNER AND NFE MAKE NO REPRESENTATIONS, WARRANTY OR GUARANTEE AS TO THE LOCATION OF THE IRRIGATION SYSTEM. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT THE IRRIGATION SYSTEM DURING CONSTRUCTION ACTIVITIES.

SUB-SOIL CONDITIONS ANY SOIL BORING PROVIDED BY THE OWNER AND/OR ENGINEER IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THIS INFORMATION IS NOT OFFERED AS EVIDENCE OF GROUND CONDITIONS THROUGHOUT THE PROJECT AND ONLY REFLECT THE GROUND CONDITIONS AT THE LOCATION OF THE BORING ON THE DATE THEY WERE TAKEN.

SUBGRADE UNDERCUTTING AND PREPARATION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY AND ALL SOILS WHICH DO NOT CONFORM TO THE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A SUBGRADE IN CONFORMANCE WITH THE PROJECT PLANS AND/OR SPECIFICATIONS. THE MEANS AND METHODS USED TO ACHIEVE THE REQUIRED RESULT SHALL REST SOLELY WITH THE CONTRACTOR.

STRUCTURE BACKFILL STRUCTURAL BACKFILL SHALL BE PLACED IN CONFORMANCE WITH THE PROJECT PLANS, SPECIFICATIONS OR AS REQUIRED BY THE COMMUNITY, GOVERNMENT AGENCY OR UTILITY THAT HAS JURISDICTION OVER THE WORK.

TRENCH BACKFILL TRENCH BACKFILL SHALL BE PLACED IN CONFORMANCE WITH THE PLANS AND/OR SPECIFICATIONS. TRENCH BACKFILL SHALL ALSO BE INSTALLED IN CONFORMANCE WITH THE COMMUNITY REQUIREMENTS OR AGENCY/UTILITY GOVERNING SAID TRENCH CONSTRUCTION. IN THE CASE OF CONFLICTING REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.

EARTH BALANCE / GRADING IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHETHER THE SITE EARTHWORK BALANCES OR NOT. ANY EXCESS CUT MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR. IN A LIKE MANNER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMPORT APPROVED FILL MATERIAL AND PLACE IT AS REQUIRED TO ATTAIN THE SITE GRADE AND COMPACTION REQUIREMENTS PER THE ENGINEER'S PLAN AND ALL APPLICABLE GOVERNMENTAL STANDARDS. THE ENGINEER AND OWNER MAKE NO REPRESENTATION AS TO THE QUANTITIES THAT MAY BE NEEDED TO CREATE A BALANCED EARTHWORK CONDITION OR THAT THE SITE EARTHWORK IS BALANCED.

SOIL EROSION / SEDIMENTATION CONTROL THE CONTRACTOR SHALL OBTAIN THE REQUIRED SOIL EROSION PERMIT AND SATISFY ALL REGULATORY REQUIREMENTS FOR CONTROLLING SOIL EROSION AND SEDIMENT TRANSPORT. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR INSPECTION OR APPROVAL OF THE CONTRACTOR'S WORK IN CONNECTION WITH SATISFYING THE SOIL EROSION PERMIT REQUIREMENTS UNLESS SPECIFICALLY STATED IN THE CONTRACT DOCUMENTS.

SEAL



**PROJECT**  
 4 Corners Square LLC  
 1449 Union Lake Road  
 White Lake Township

**CLIENT**  
 VERITAS  
 29580 Northwestern Hwy,  
 Suite 1000  
 Southfield, Michigan 48075

Contact: Shakir W. Alkhafaji, President  
 Phone: (248) 559-5555

**PROJECT LOCATION**  
 Part of the E. 1/2 of the SE. 1/4 of Section 8 T.3N., R.8E. White Lake Township, Oakland County, Michigan

**SHEET**  
 Landscape Plan



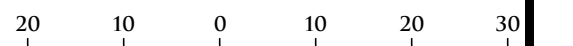
Know what's below  
 Call before you dig.

**DATE** ISSUED/REVISED  
 10-14-21 ISSUED FOR SITE PLAN REVIEW  
 11-08-21 REVISED PER SITE PLAN REVIEW

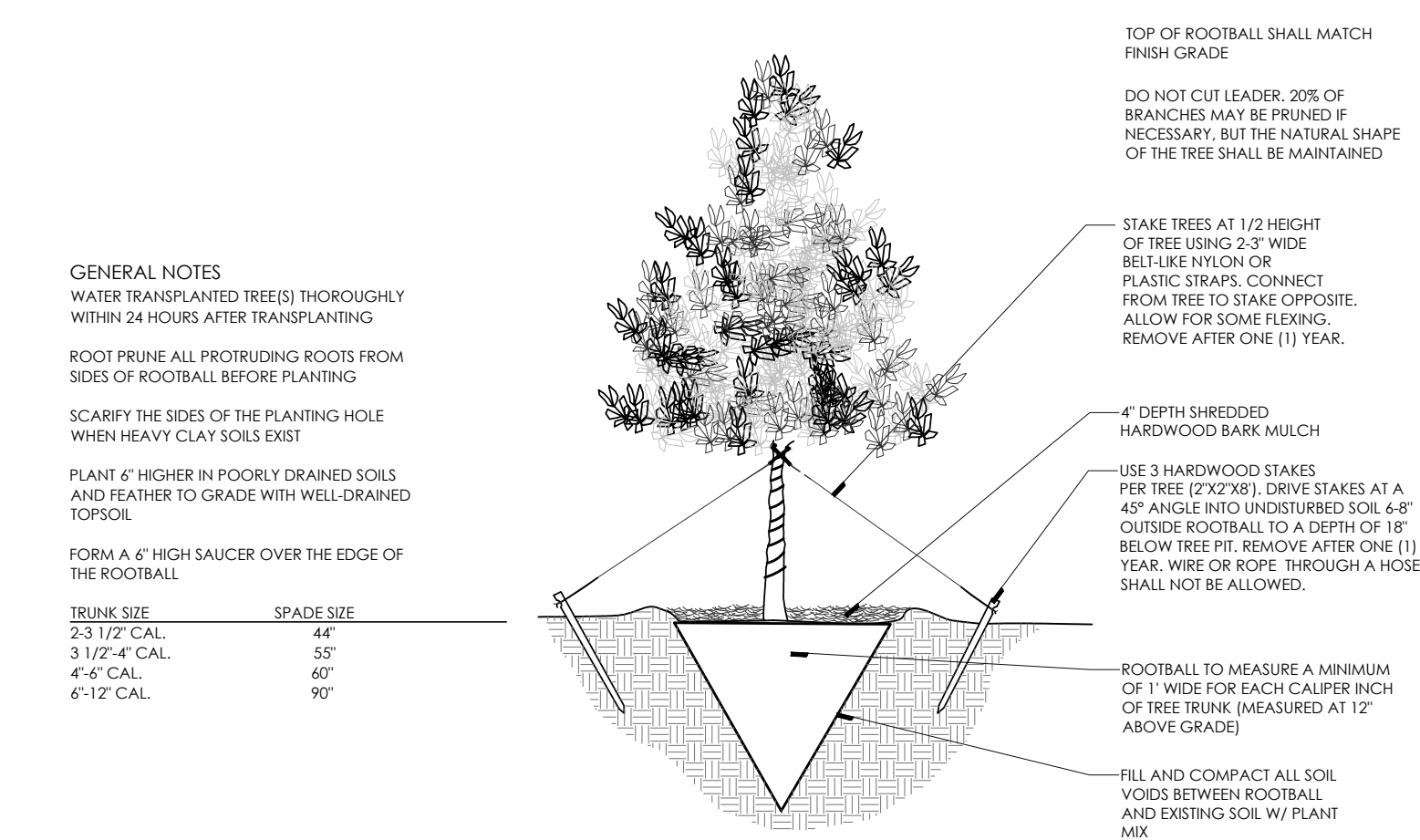
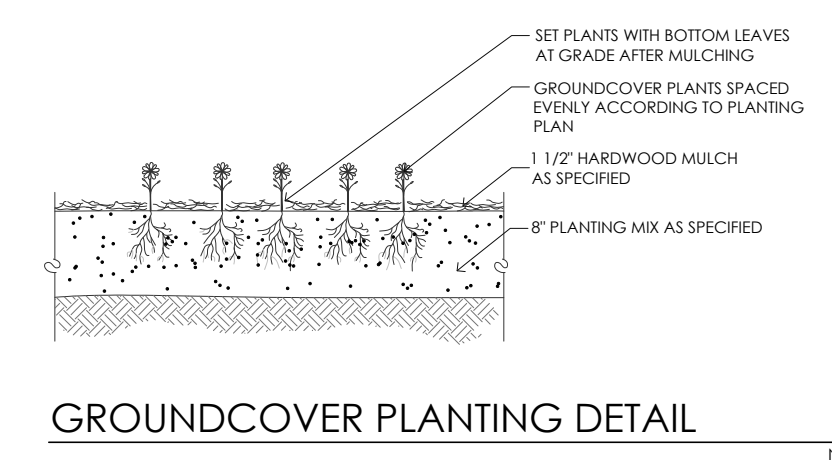
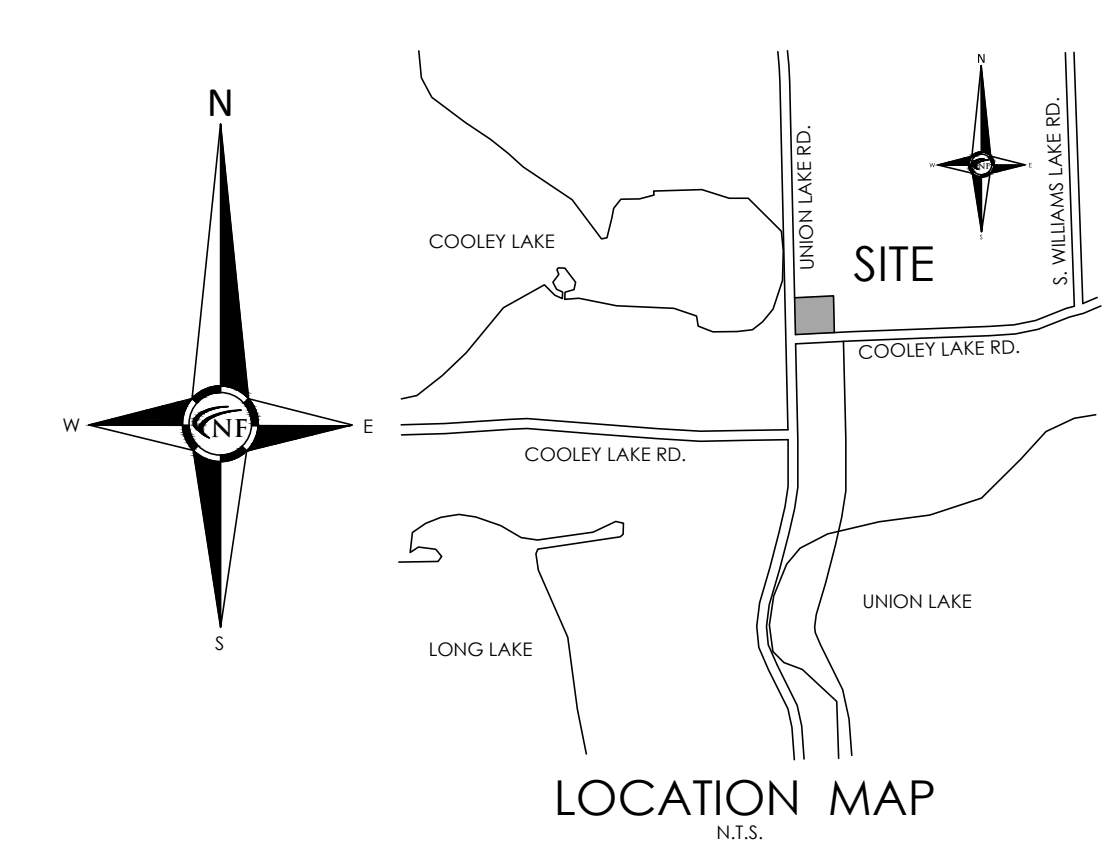
**DRAWN BY:**  
 G. Ostrowski  
**DESIGNED BY:**  
 G. Ostrowski  
**APPROVED BY:**  
 G. Ostrowski

**DATE:**  
 08-25-2021

**SCALE:** 1" = 20'

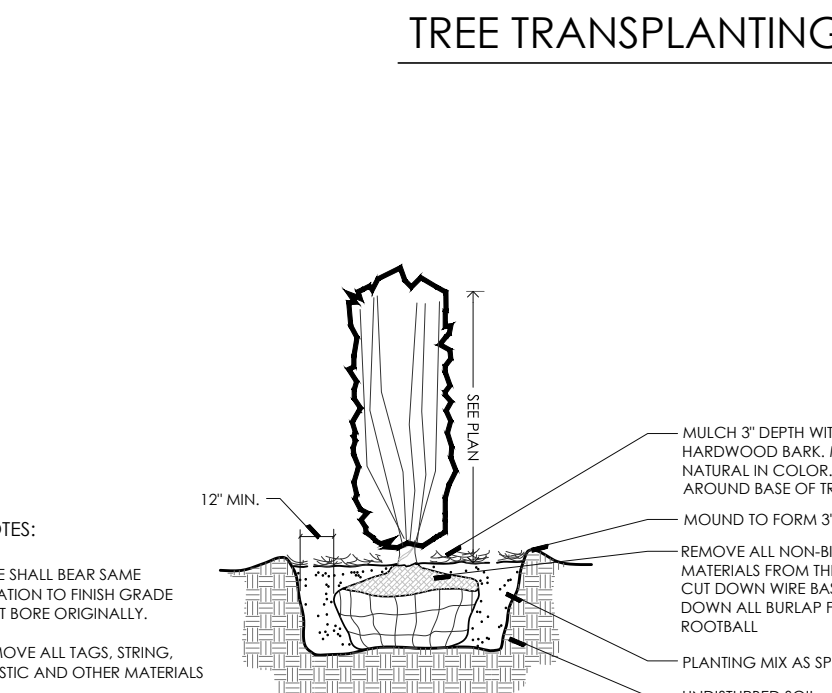


**NFE JOB NO.** SHEET NO.  
**J635-03** **L1**



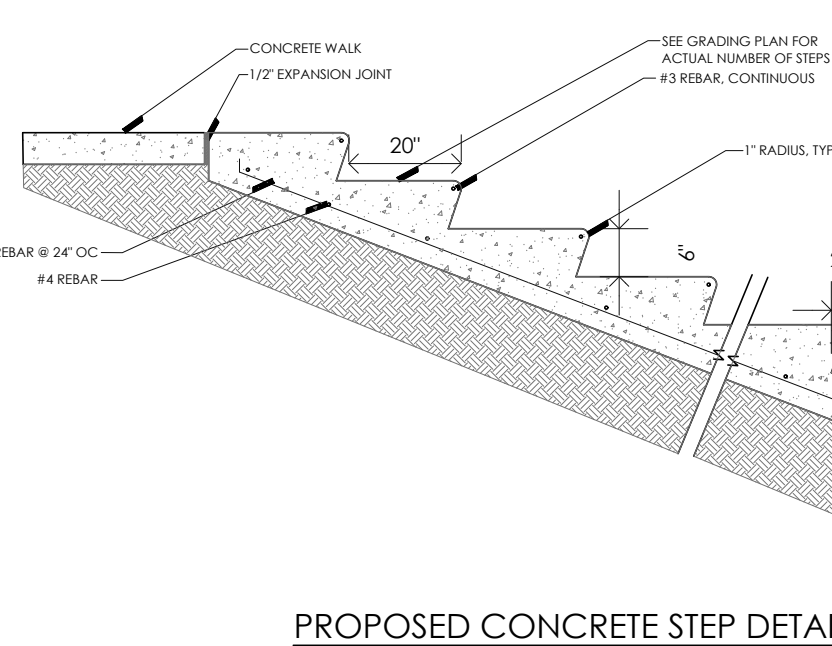
**GENERAL NOTES**  
 WATER TRANSPANTED TREES THOROUGHLY WITHIN 24 HOURS AFTER TRANSPLANTING  
 ROOT PRUNE ALL PROTRUDING ROOTS FROM SIDES OF ROOTBALL BEFORE PLANTING  
 SCARIFY THE SIDES OF THE PLANTING HOLE WHEN HEAVY CLAY SOILS EXIST  
 PLANT 6" HIGHER IN POORLY DRAINED SOILS AND FEATHER TO GRADE WITH WELL-DRAINED TOPSOIL  
 FORM A 6" HIGH SAUCER OVER THE EDGE OF THE ROOTBALL

TRUNK SIZE	SPACE SIZE
2 1/2" CAL.	44"
3 1/2" CAL.	55"
4" CAL.	60"
6" CAL.	90"

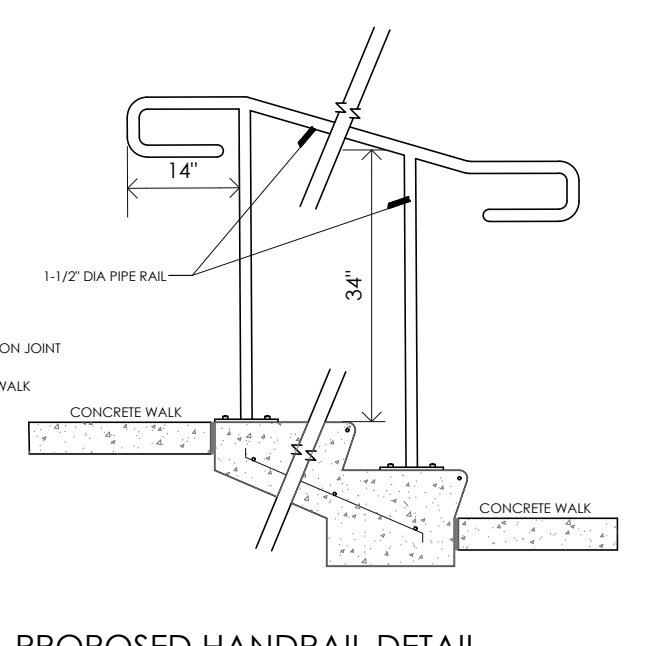


**NOTES:**  
 TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE ORIGINALLY.  
 REMOVE ALL TAGS, STRING, PLASTIC AND OTHER MATERIALS

UPRIGHT EVERGREEN SHRUB PLANTING DETAIL



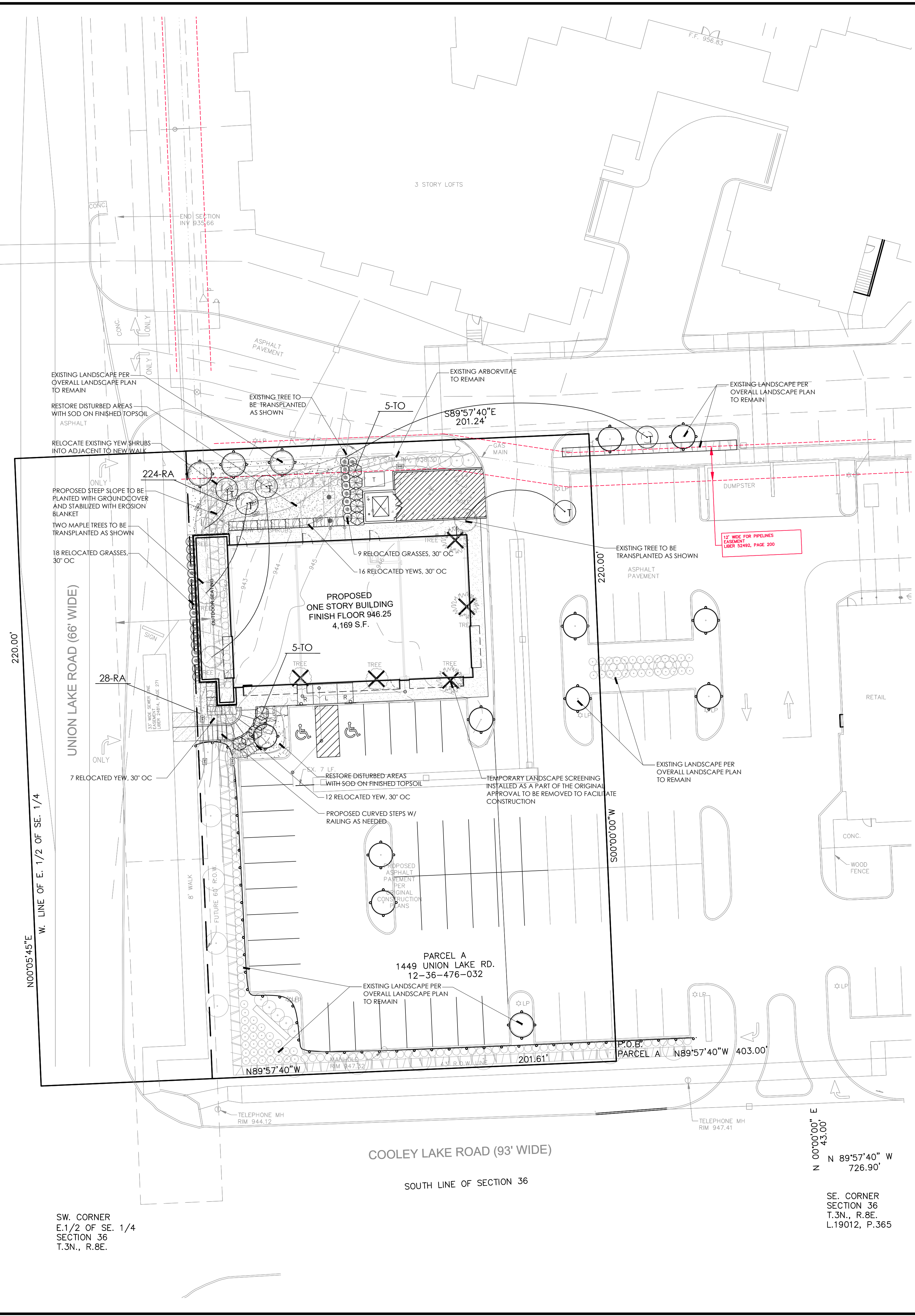
PROPOSED CONCRETE STEP DETAIL



PROPOSED HANDRAIL DETAIL

**PLANT SCHEDULE**

KEY	QTY	BOTANICAL/COMMON NAME	SIZE	SPACING	ROOT	COMMENT
<b>SHRUBS</b>						
TO	10	<i>Thuja occidentalis</i> 'Smaragd' Emerald Green Arborvitae	6' HT	30" OC	B&B	
<b>GROUNDCOVER</b>						
RA	252	<i>Rhus aromatica</i> 'Low-Grow' Low-Grow Fragrant Sumac	3 GAL	24" OC	CONT	TRIANGULAR SPACING

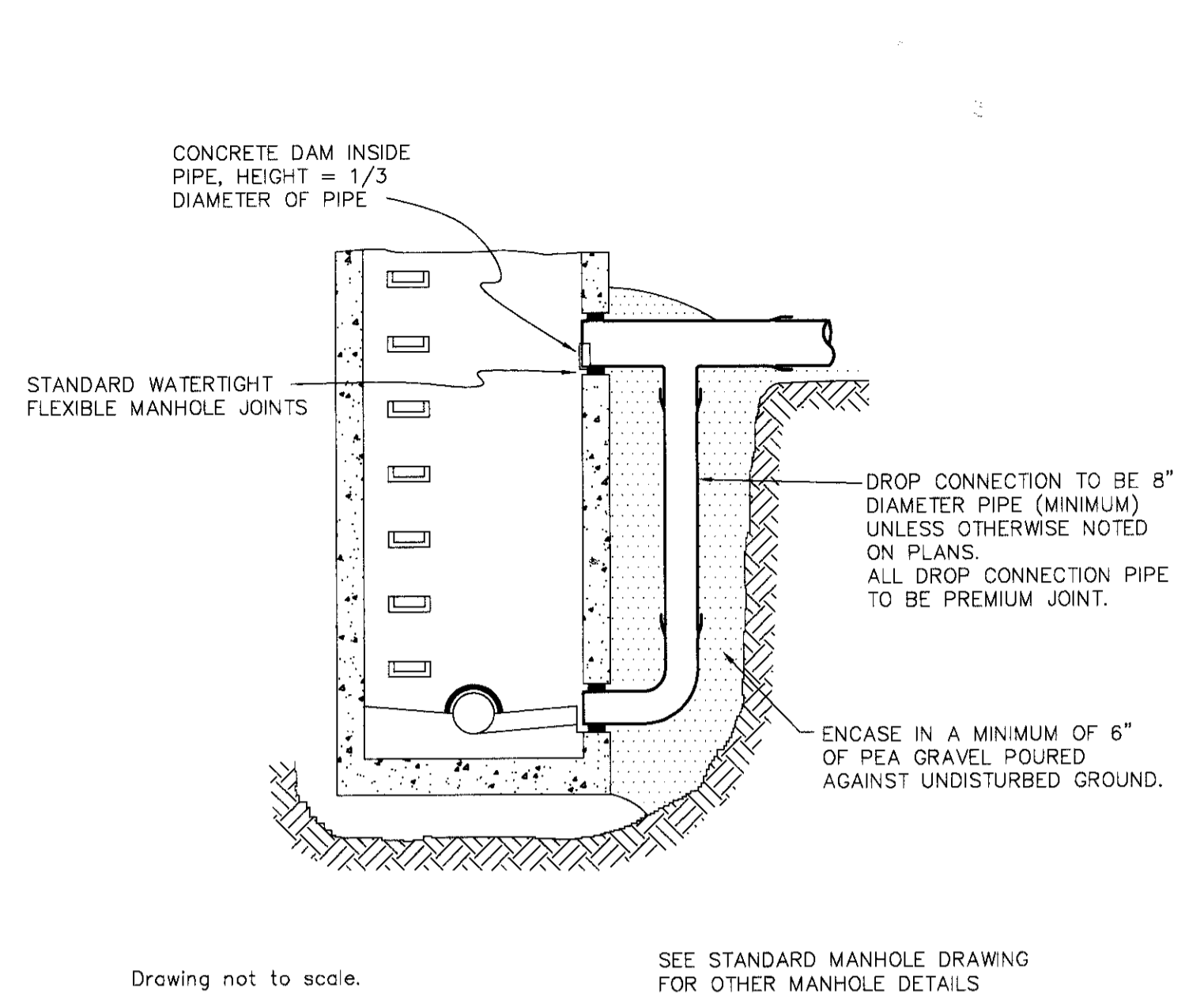


SW CORNER SECTION 36 T.3N., R.8E.

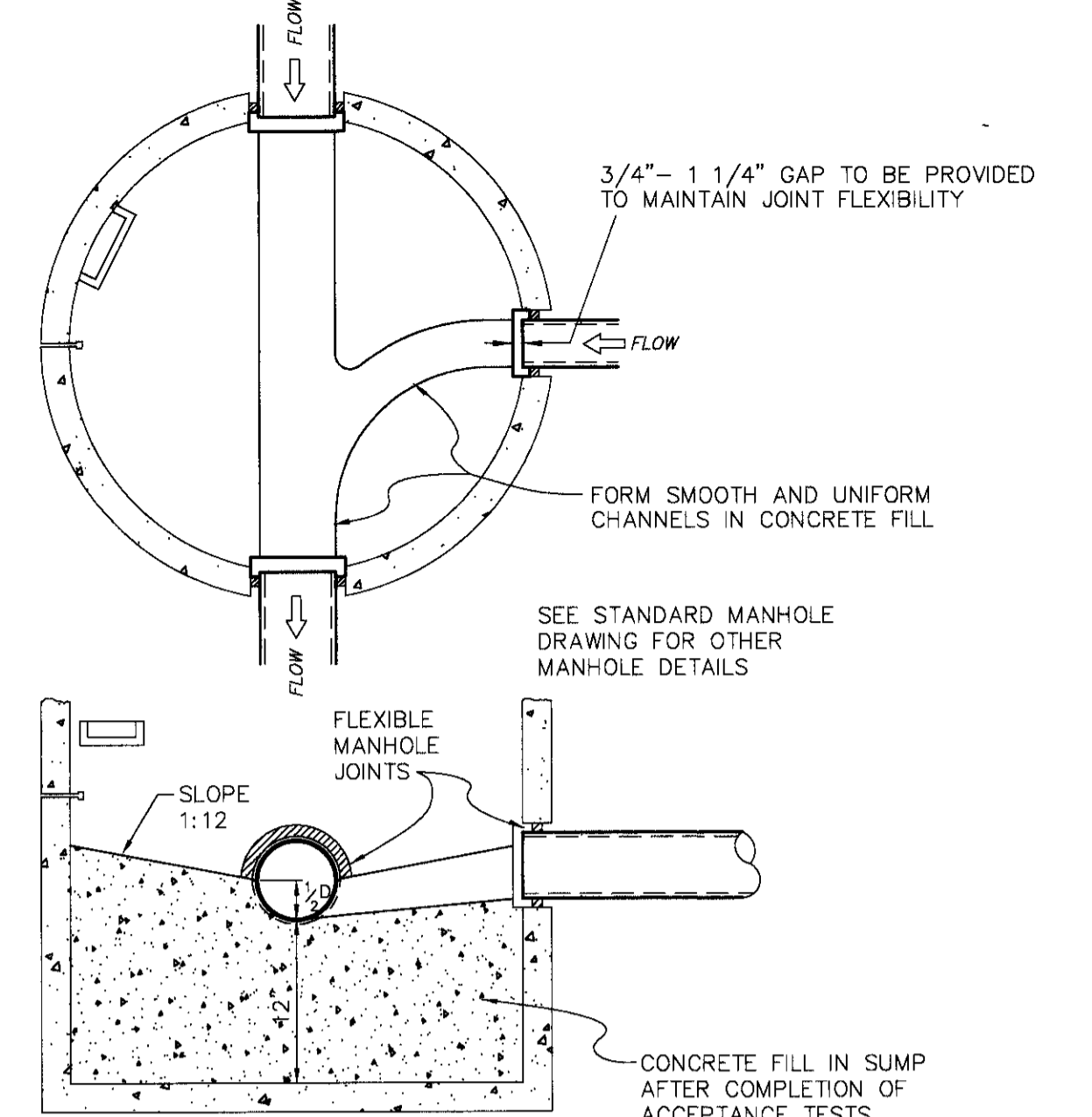
SE CORNER SECTION 36 T.3N., R.8E. L.19012, P.365

SANITARY SEWER CONSTRUCTION NOTES

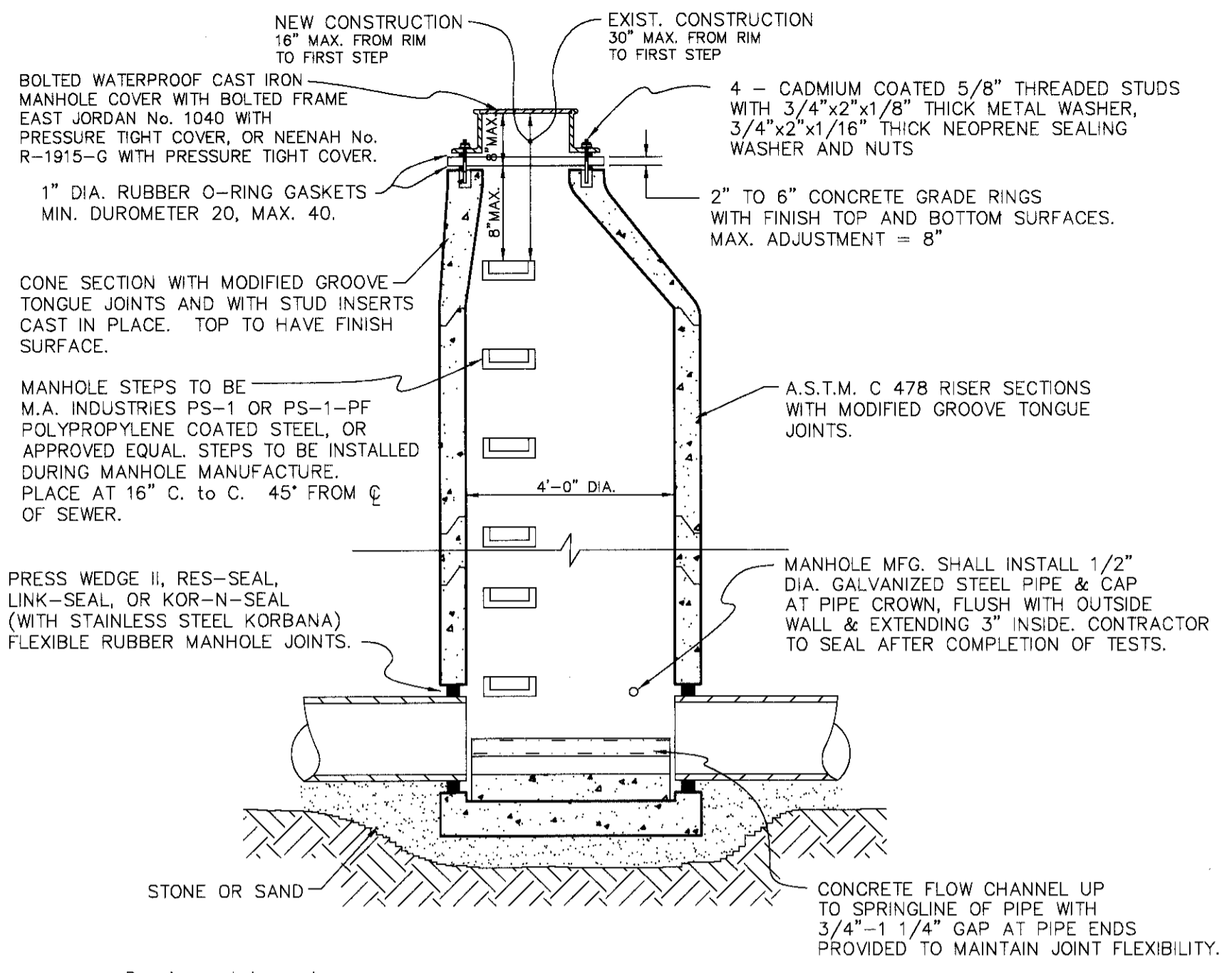
- All construction shall conform to the current standards and specifications of the local unit of government and the Oakland County Drain Commissioner (O.C.D.C.). All sanitary sewer construction shall have full time inspection supervised by a professional engineer provided by or caused to be provided by the local unit of government.
- At all connections to Oakland County Drain Commissioner's sewers or extensions, and before start of construction, the Contractor must obtain a Sewer Inspection Permit issued by the O.C.D.C. Gravity sewer permit charges are \$150.00 for each connection plus \$15.00 for each manhole constructed. Pressure sewer permit charges are \$250.00 per 2460 l.f. of force main with a minimum permit fee of \$250.00. Failure to pass any test segment will result in an additional charge to the Contractor for each retest in accordance with the above price schedule. The Contractor shall also have posted with the O.C.D.C. a \$5,000.00 surety bond and \$500.00 cash deposit. The Contractor shall notify the local unit of government and the O.C.D.C. 24 hours prior to the beginning of any construction. Final air tests must be witnessed by County personnel and must be scheduled in advance.
- No sewer installation shall have an infiltration exceeding 200 gallons per inch diameter per mile of pipe in a 24 hour period, and no single run of sewer between manholes shall exceed 250 gallons per inch diameter per mile. Air tests in lieu of infiltration tests shall be as specified in the O.C.D.P.W. "Acceptance Tests", dated September, 1972. Only pipe and pipe joints approved by the Oakland County Drain Commissioner may be used for sanitary sewer construction.
- At all connections to an existing Oakland County Drain Commissioner sewer or extension thereto a watertight bulkhead with a capped 1-inch diameter pipe to permit measuring infiltration shall be provided. A temporary 12-inch deep sump shall also be provided in the first manhole above the connection which will be filled in after such successful completion of any infiltration test up to the standard fillet provided for the flow channel.
- All building leads and risers shall be 6-inch S.D.R. 23.5 ABS OR PVC pipe with chemically fused joints, or an approved equal pipe and joint. Sewer pipe wye or tee openings shall contain factory installed premium joint material of an approved type compatible with that of the building lead pipe used. Building leads to be furnished with removable air tight and water-tight stoppers.
- All rigid sewer pipe shall be installed in Class "B" bedding or better. All flexible, semi-flexible or composite sewer pipe shall be installed in conformance to the Oakland County Drain Commissioner specifications.
- All new manholes shall have Oakland County Drain Commissioner approved flexible, water-tight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Precast manhole cone sections shall be Oakland County Drain Commissioner approved modified eccentric cone type. All manholes shall be provided with bolted, water-tight covers.
- At all connections to manholes on Oakland County Drain Commissioner's sewers or extensions thereto drop connections will be required when the difference in invert elevations exceeds 18-inches. Outside drop connections only will be approved.
- Taps to existing manholes shall be made by coring. The Contractor shall place a KOR-N-SEAL boot (or O.C.D.C. approved equal) after coring is completed. Blind drilling will not be permitted in lieu of coring.
- New manholes constructed directly on Oakland County Drain Commissioner's sewers shall be provided with covers reading "Oakland County - Sanitary" in raised letters. New manholes built over an existing sanitary sewer shall have monolithic poured bottoms.
- No ground water, storm water, construction water, downspout drainage or weep tile drainage shall be allowed to enter any sanitary sewer installation.
- Prior to excavation, the Contractor shall telephone MISS DIG (647-7344) for the location of underground pipeline and cable facilities, and shall also notify representatives of other utilities located in the vicinity of the work.
- 18" minimum vertical separation and 10' minimum horizontal separation must be maintained between sanitary sewer and water main.
- Manhole frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #R-1642 manhole frame. Solid lid cover shall be non-rocking and marked "WHITE LAKE TOWNSHIP SEWER DEPARTMENT."



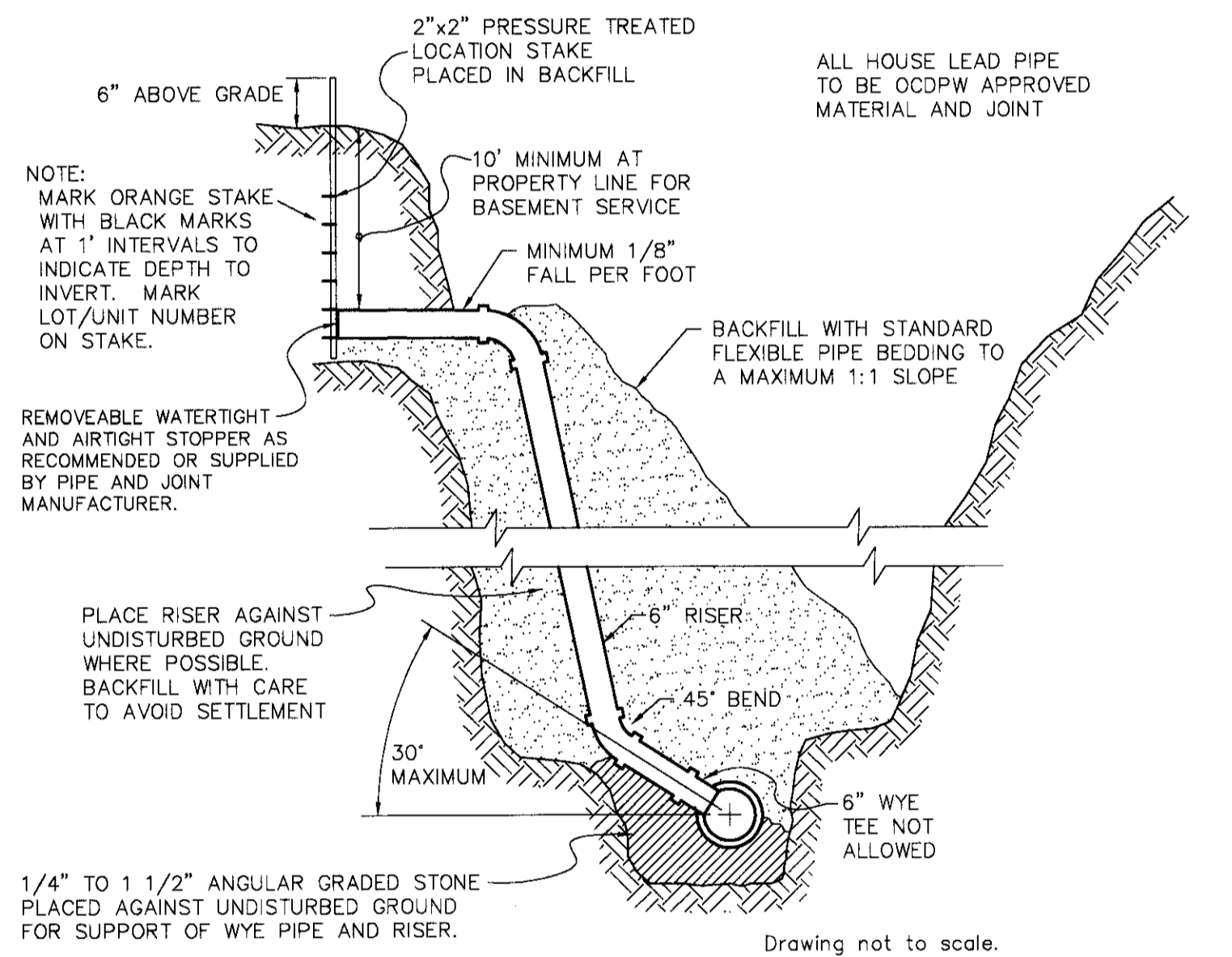
EXTERIOR DROP CONNECTION



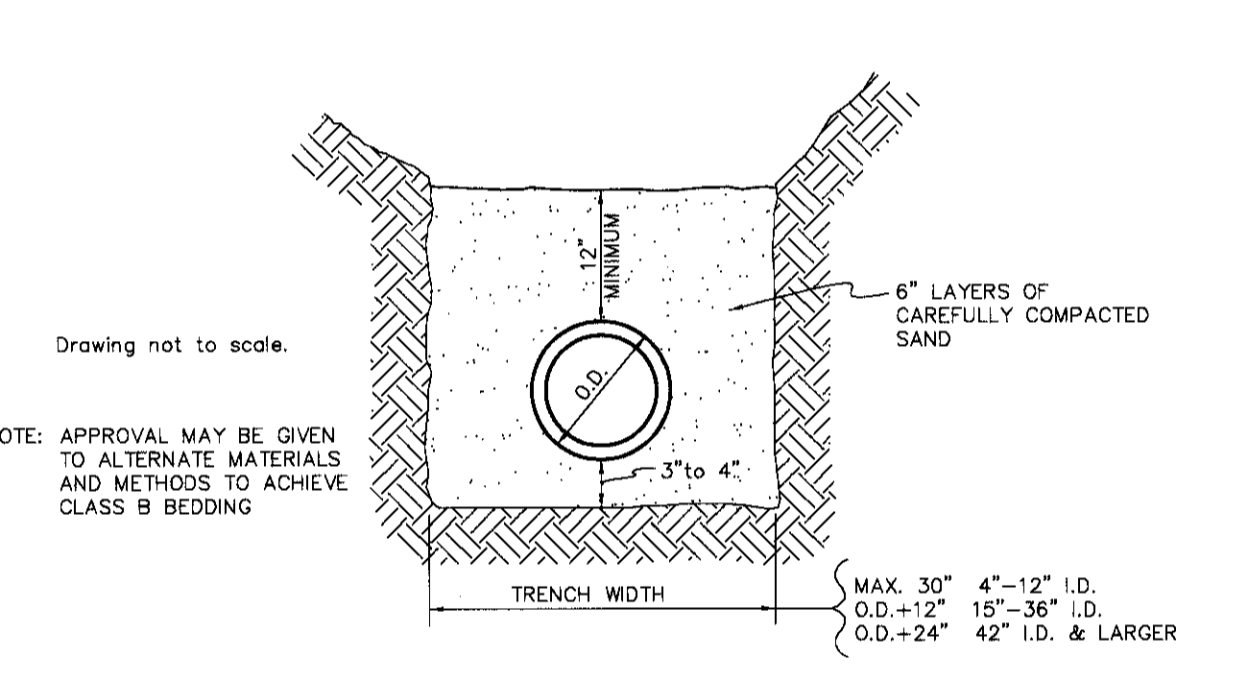
SUMP MANHOLE FOR TESTING, CLEANING, AND DEWATERING



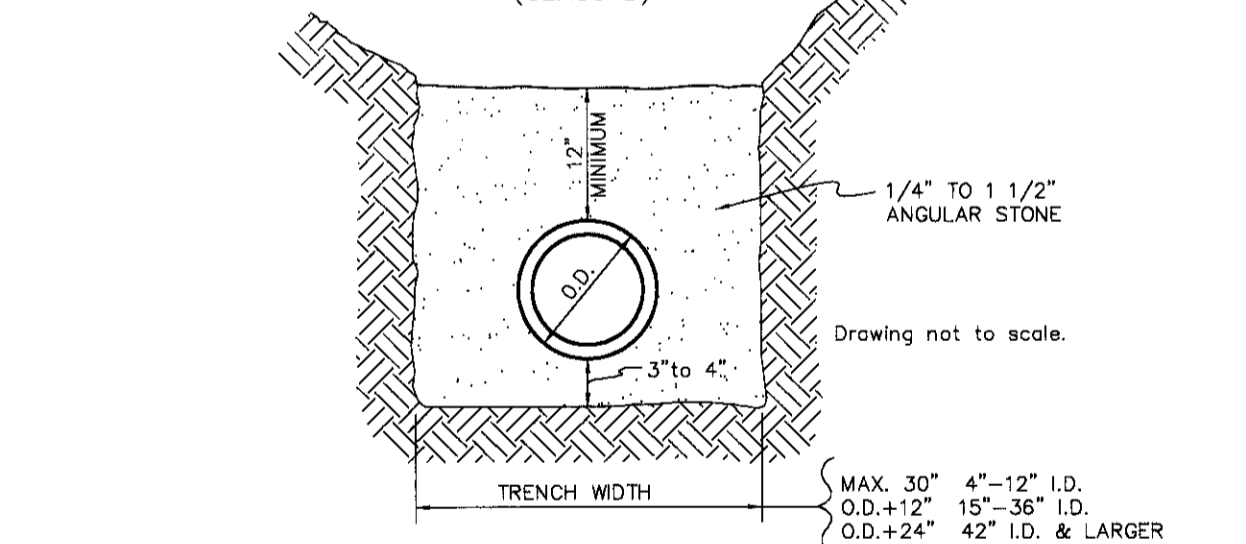
STANDARD MANHOLE ON 8" THROUGH 24" DIAMETER SEWERS



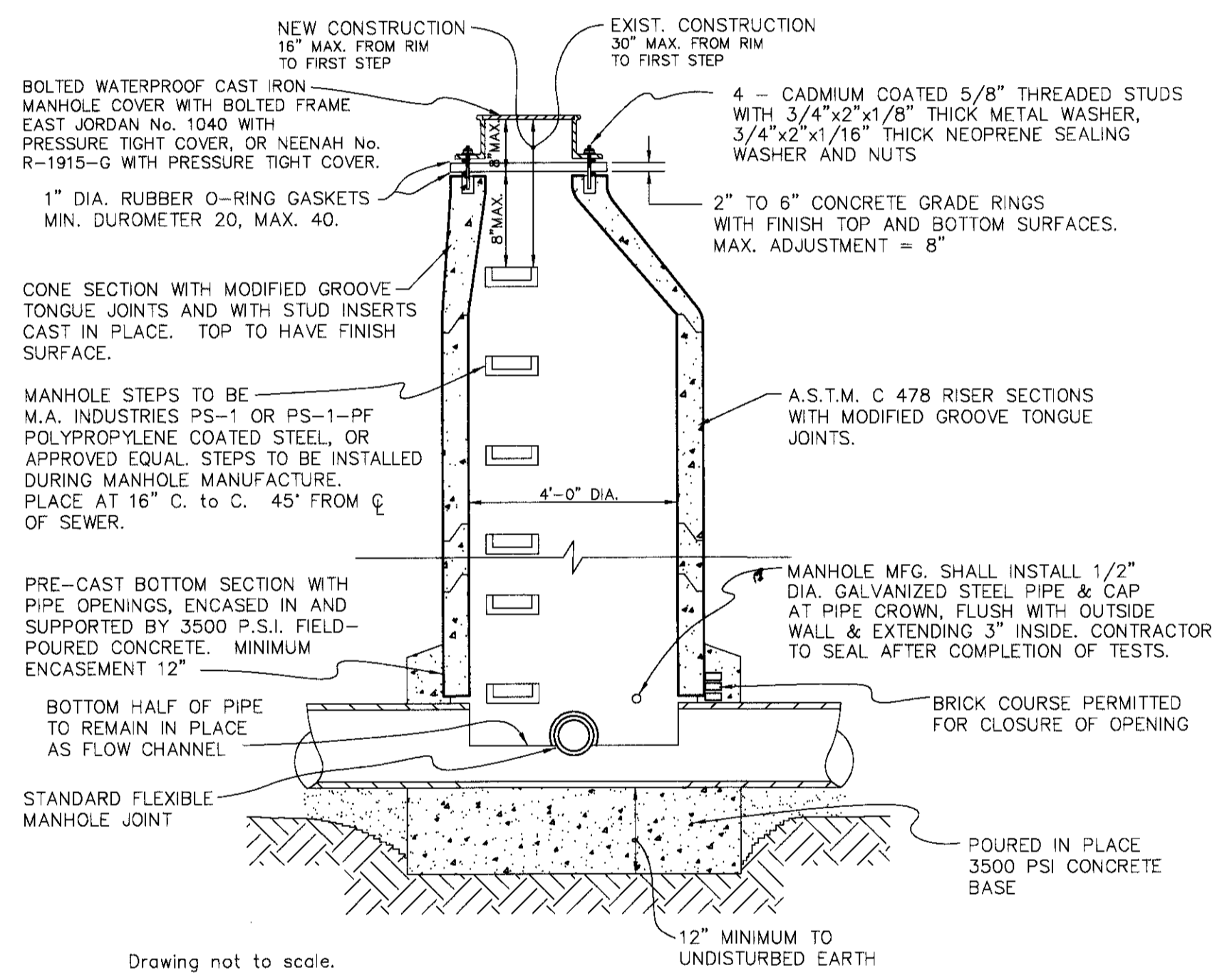
HOUSE/BUILDING LEAD DETAIL



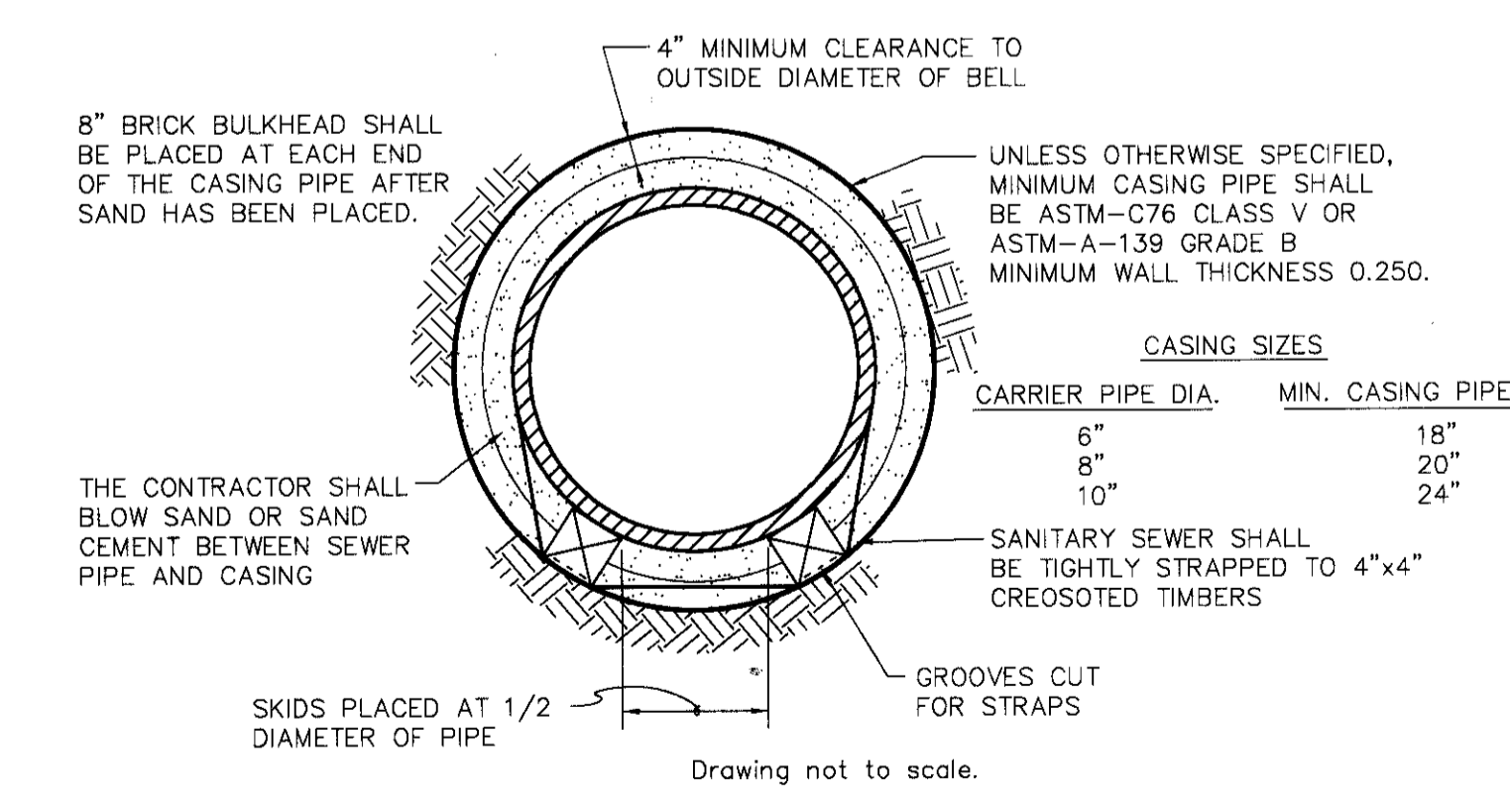
BEDDING DETAIL FOR RIGID PIPE (CLASS B)



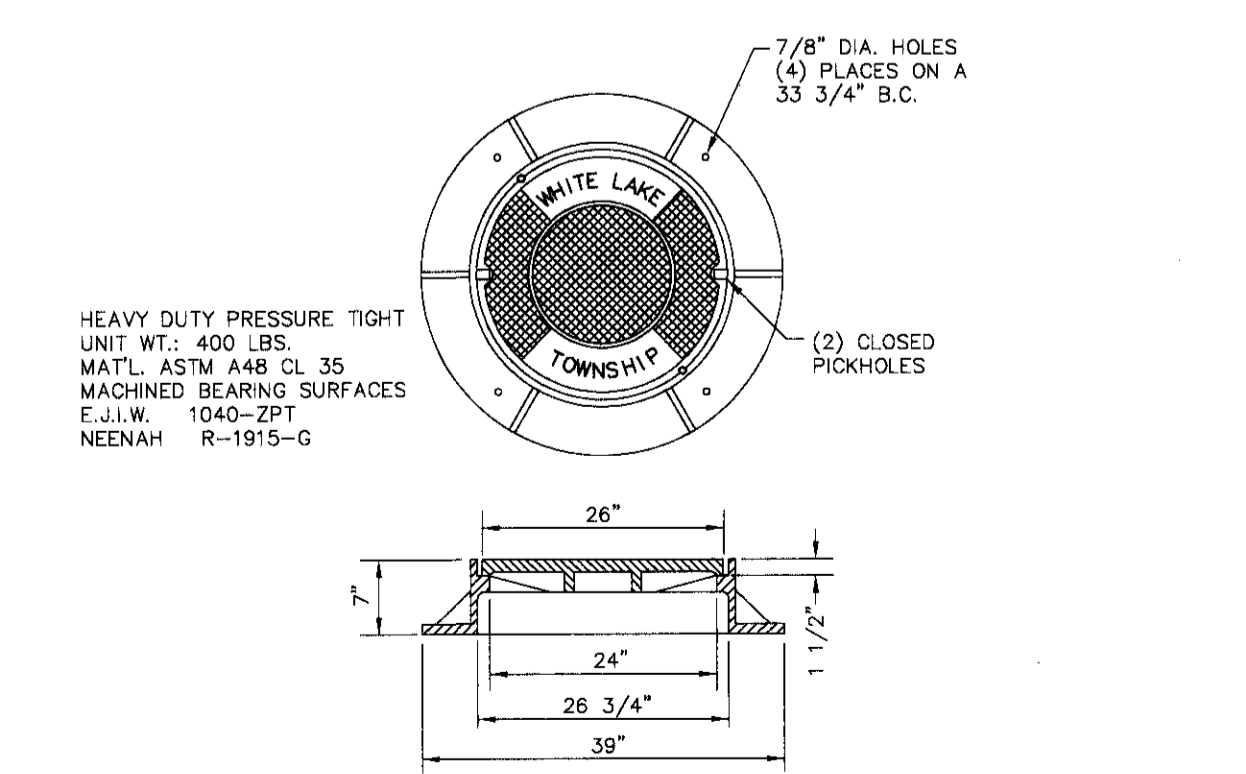
BEDDING DETAIL FOR FLEXIBLE PIPE



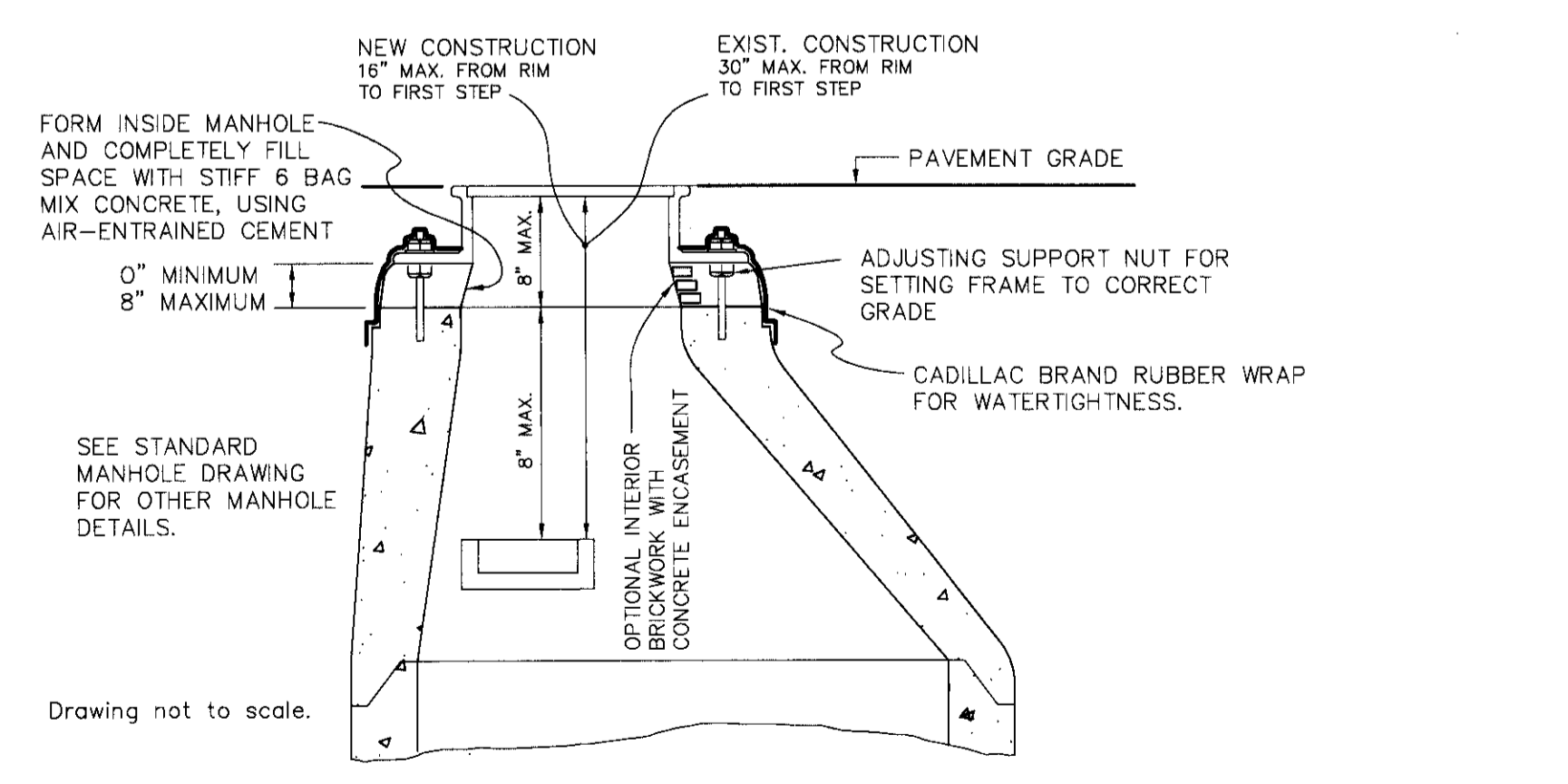
SKETCH OF MINIMUM MANHOLE REQUIREMENTS ON MANHOLES CONSTRUCTED OVER EXISTING SEWERS



PIPE BARREL SUPPORT FOR SEWER



MANHOLE COVER & FRAME



OPTIONAL CONSTRUCTION DETAILS

DRAWN: CAD  
 DESIGN: OA  
 CHECKED:

SCALE: VERT. AS NOTED  
 HORZ.

REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
		FIRST ISSUE	9-11-97						

**Johnson & Anderson, Inc.**  
 CONSULTING ENGINEERS  
 4479 DIXIE HIGHWAY  
 WATERFORD, MICHIGAN 48329  
 (248) 698-3300

**White Lake Charter Township**  
 7525 Highland Road, White Lake, Michigan 48383-2900  
 (248) 698-3300

**SANITARY SEWER STANDARD DETAILS**

JOB NO. \_\_\_\_\_  
 DATE ISSUED 9-11-97  
 SHEET NO. 88

C:\Drawings\Std-Detail\Std-Detail-Sanitary.dwg Thu Sep 11 13:55:50 1997 rdl

BRD24X36

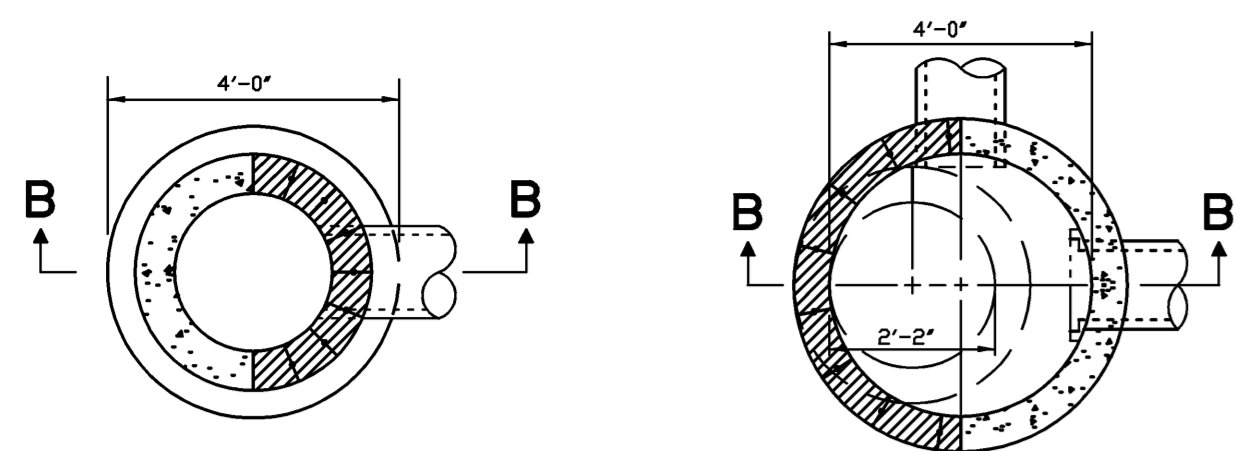


STORM SEWER NOTES

1. PRECAST CONC. RISERS SHALL MEET A.S.T.M. C478
2. DIAMETER OF CONC. BASE: I.D. + 2(WALL) + 8"
3. MANHOLE STEP SPACING SHALL MEET MIOSHA REQUIREMENTS. NO MORE THAN 21" FROM RIM TO FIRST STEP. MAX. 16" O.C. STEPS SHALL BE CAST POLYPROPYLENE REINFORCED WITH A 1/2" STEEL ROD.
4. WALL THICKNESS OF BLOCK STRUCTURES SHALL BE:
 

DEPTH	THICKNESS
0-8'	6"
8-15'	8"
OVER 15'	12"
5. MINIMUM I.D. OF STRUCTURE FOR: 36" to 42" = 5'-0"  
48" to 54" = 6'-0"  
LARGER DIAMETER STRUCTURES MAY BE REQUIRED DEPENDING ON PIPING CONFIGURATION.
6. ALL LIFTING HOLES AND VOIDS IN INTERIOR JOINTS SHALL BE FILLED BY MORTAR.
7. THE FINGER DRAIN DETAIL SHALL BE USED AT ALL LOW POINT CATCH BASINS IN PAVEMENT AREAS. THE DETAIL MAY BE OMITTED WITH THE APPROVAL OF THE TOWNSHIP ENGINEER IN AREAS WITH VERY POROUS SOILS AND NO GROUNDWATER PROBLEMS.
8. PRECAST ONE PIECE BASES AND RISERS ARE ACCEPTABLE FOR INLETS, CATCH BASINS AND MANHOLES
9. FRAMES & COVERS WITH INLET CAPACITY
  - TRAFFIC AND PARKING AREAS: MDOOT "D" (EJW 5105) 1.9 CFS
  - REAR YARD AND DITCH INLETS: MDOOT "E" (EJW 6508) 3.1 CFS
  - MANHOLES: MDOOT "A" (EJW 1060)
  - CURB AND GUTTER INLETS: MDOOT "K" (EJW 7045) 1.8 CFS
  - MOUNTABLE CURB & GUTTER: MDOOT "C" (EJW 7066) 2.2 CFS
10. CONTACT THE TOWNSHIP ENGINEER 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE INSPECTION. FULL TIME INSPECTION WILL BE REQUIRED FOR ALL UNDERGROUND STORM SEWER CONSTRUCTION. PHONE (248) 334-9901
11. THE CONTRACTOR SHALL CONTACT MISS DIG 72 HOURS BEFORE CONSTRUCTION AT (800) 482-7171 TO LOCATE EXISTING UNDERGROUND UTILITIES.
12. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL HAVE IN HIS POSSESSION A CURRENT SOIL EROSION CONTROL PERMIT AS ISSUED BY THE OAKLAND COUNTY DRAIN COMMISSIONER.
13. A 2' DEEP SUMP SHALL BE USED IN ANY STRUCTURE SUBJECT TO A WATER DROP GREATER THAN 2.0' FROM AN INLET PIPE.
14. ALLOWABLE STORM SEWER PIPE TYPES:
  - 12" AND UP: RCP ASTM C-76 MIN. CLASS 3, MIN. CLASS 4 UNDER TRAFFIC AREAS, RUBBER JOINT
  - 6" TO 15" SCH 40 PVC OR SDR 23.5 PVC WITH RUBBER OR GLEE JOINT
  - 6" TO 48" SMOOTH BORE CORRUGATED HIGH DENSITY POLYETHYLENE WITH NEOPRENE LINED JOINTS OR BETTER
15. THE MINIMUM PIPE SIZE IN PUBLIC RIGHT-OF-WAY OR EASEMENTS AND FOR PIPES CARRYING OFF-SITE STORM WATER SHALL BE 12"
16. ALL PIPE ENDS NOT WITHIN A STRUCTURE SHALL HAVE A CONCRETE OR METAL FLARE END SECTION (FES) WITH A BAR SCREEN ON PIPES 18" AND LARGER EXCEPT THOSE WITHIN A SECURE FENCED AREAS/NEED NO BAR SCREEN.
17. ALL DRAINAGE STRUCTURES WITHIN THE ROAD SHALL BE SEALED WITH WRAPPED GEOTEXTILE PER RDCD STANDARDS

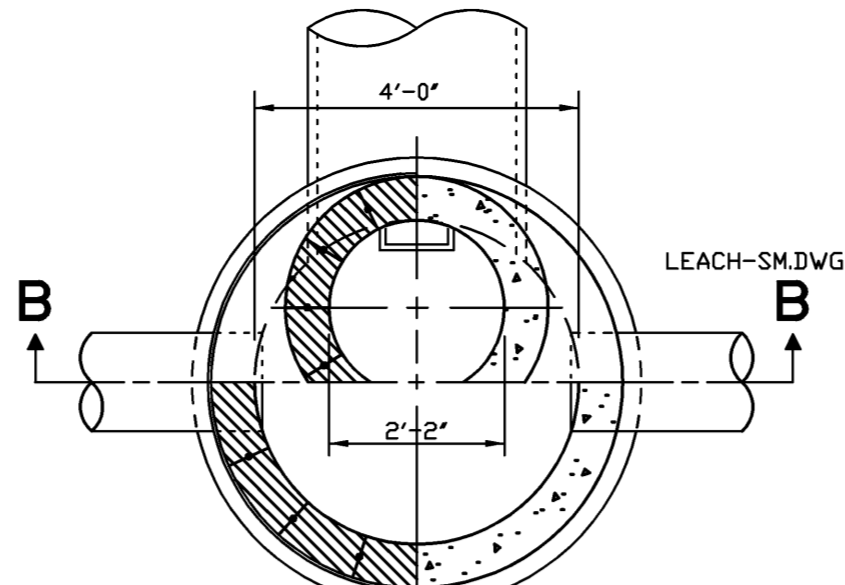
PIPE DIA.	"D"	"E"	"F"	S.Y.
12"	5'-0"	6'-6"	3'-0"	4
15"	5'-0"	7'-0"	3'-0"	4
18"	5'-0"	7'-6"	3'-6"	4
21"	5'-6"	8'-0"	4'-0"	5
24"	6'-0"	8'-6"	4'-6"	6
27"	6'-6"	9'-0"	5'-0"	6
30"	7'-0"	9'-6"	5'-6"	7
36"	7'-6"	10'-0"	5'-6"	8
42"	8'-0"	10'-6"	6'-0"	10
48"	9'-0"	11'-0"	6'-6"	12
	10'-0"	13'-0"	7'-0"	14



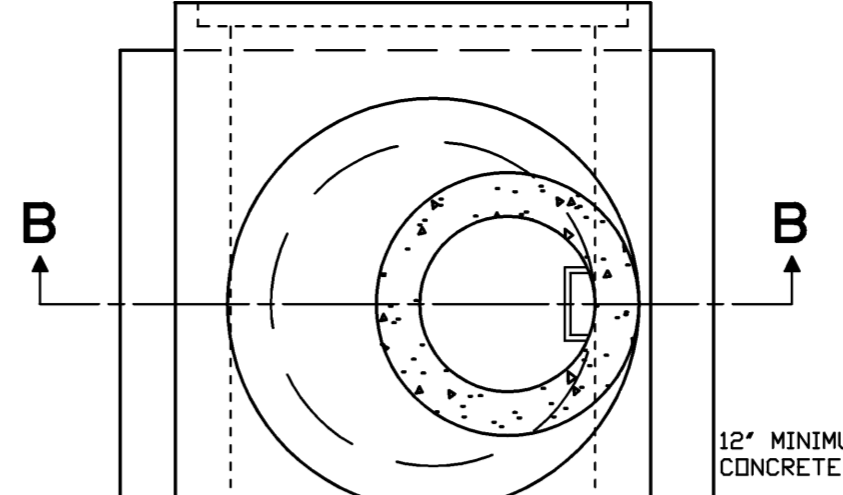
SECTION A-A

SECTION A-A

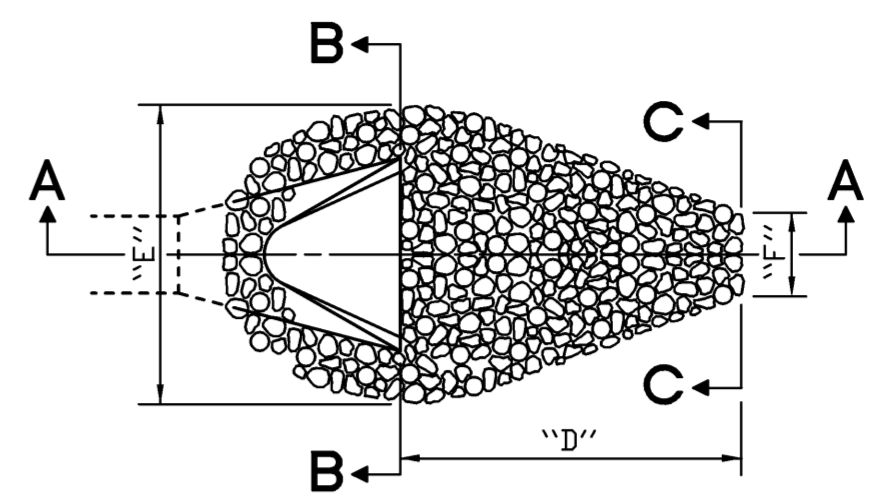
SECTION A-A



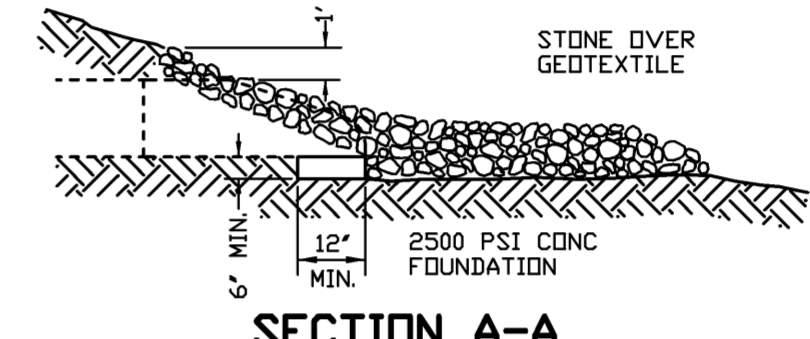
SECTION A-A



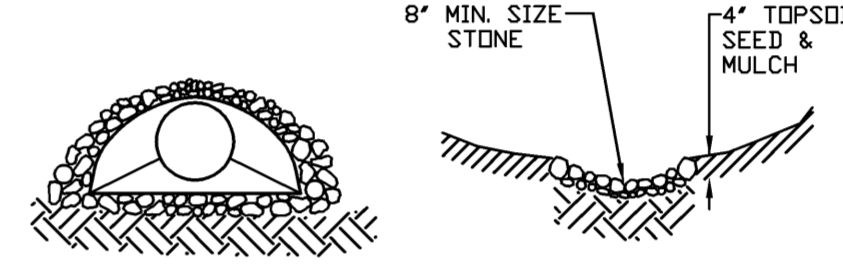
SECTION A-A



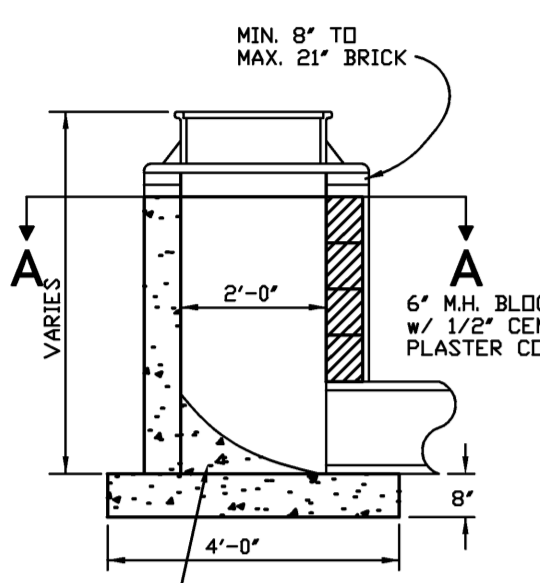
PLAN VIEW



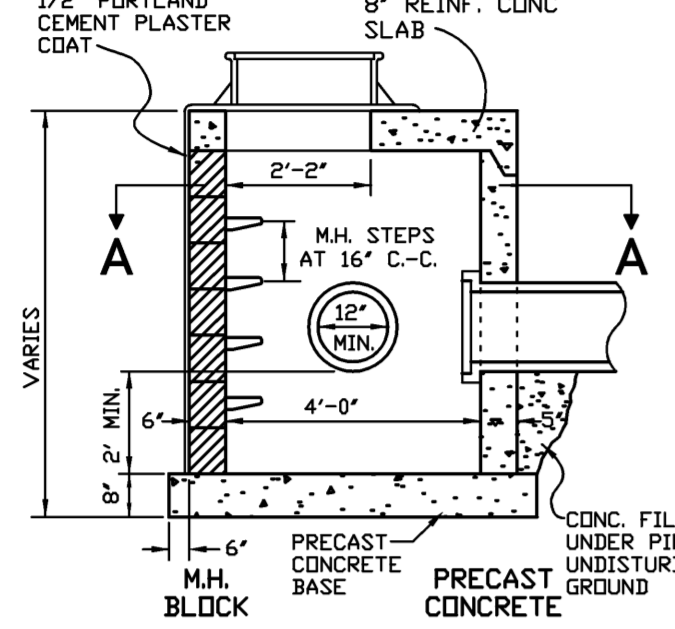
SECTION A-A



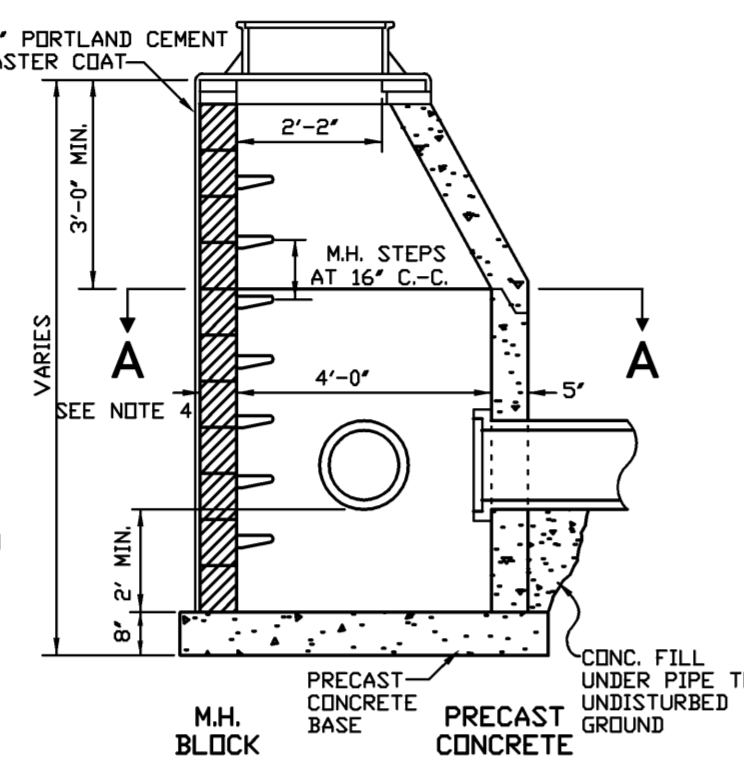
SECTION B-B SECTION C-C  
PLAIN STONE RIP-RAP



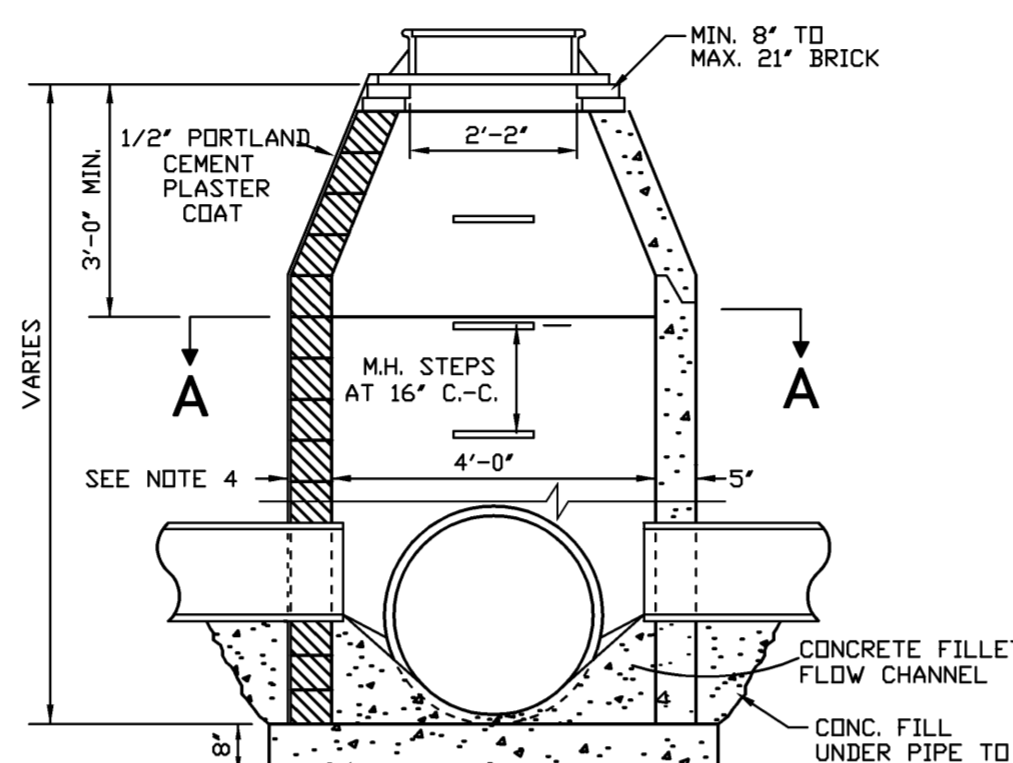
SECTION B-B  
24" INLET



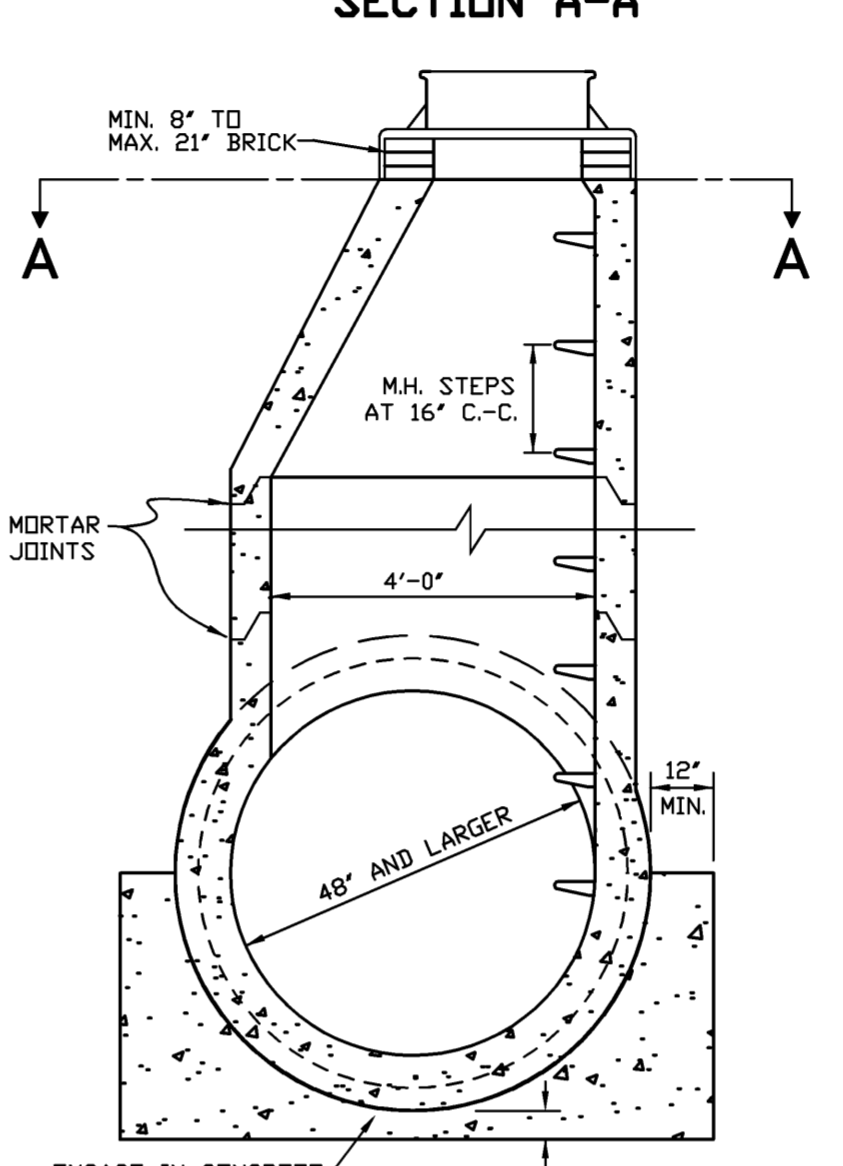
SECTION B-B  
STRUCTURE WITH  
SLAB COVER  
(CATCH BASIN SHOWN)



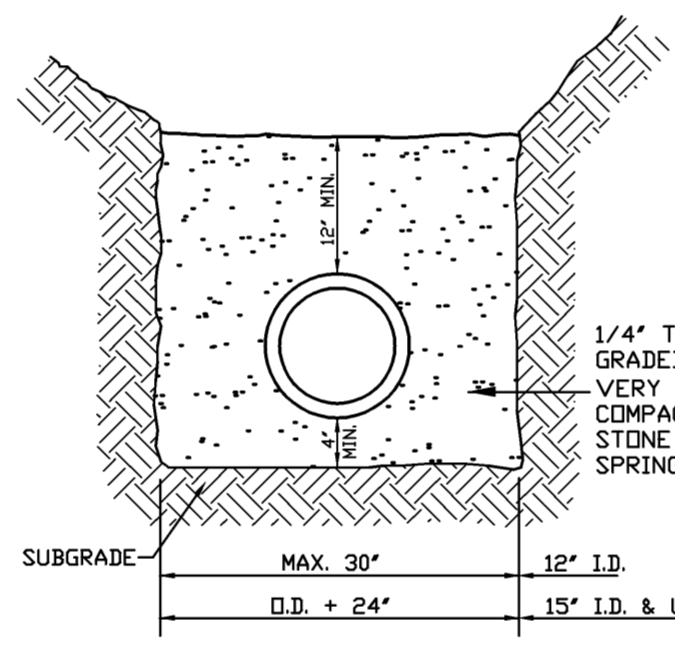
SECTION B-B  
STANDARD CATCH BASIN



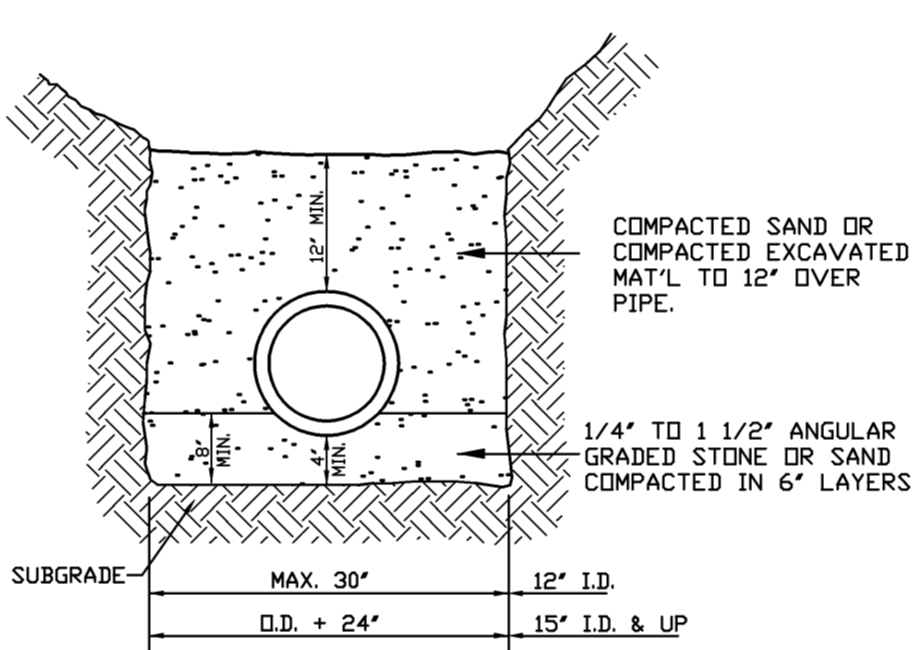
SECTION B-B  
STANDARD STORM MANHOLE



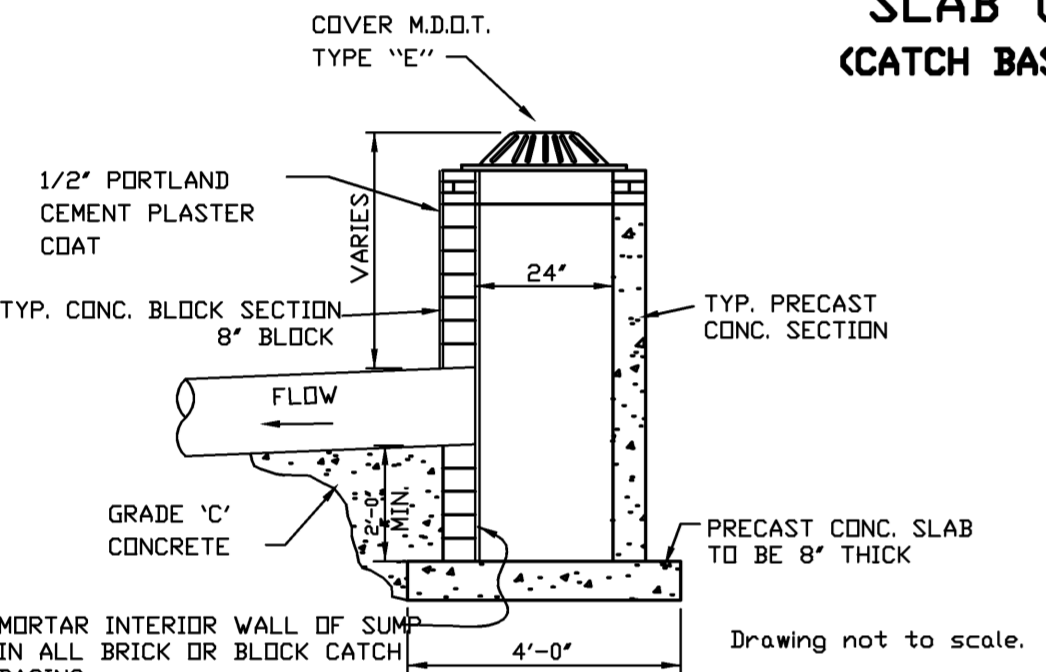
SECTION B-B  
STANDARD PRECAST CONCRETE  
MANHOLE TEE



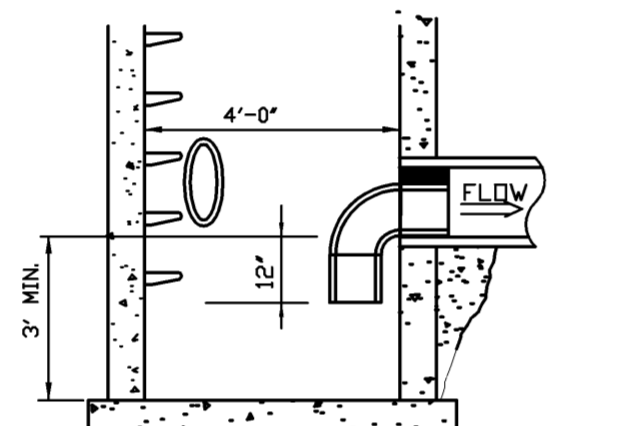
PIPE BEDDING  
FOR PLASTIC PIPE



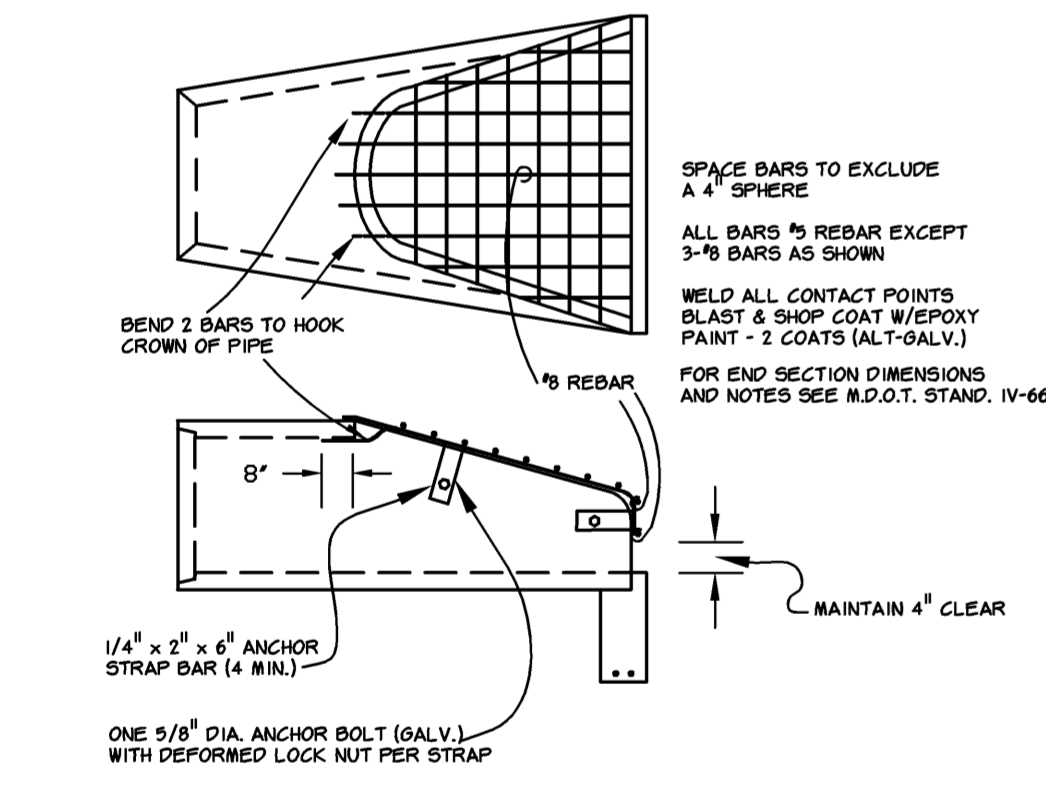
CLASS "B" BEDDING  
FOR SEWER PIPE  
LESS THAN 48"



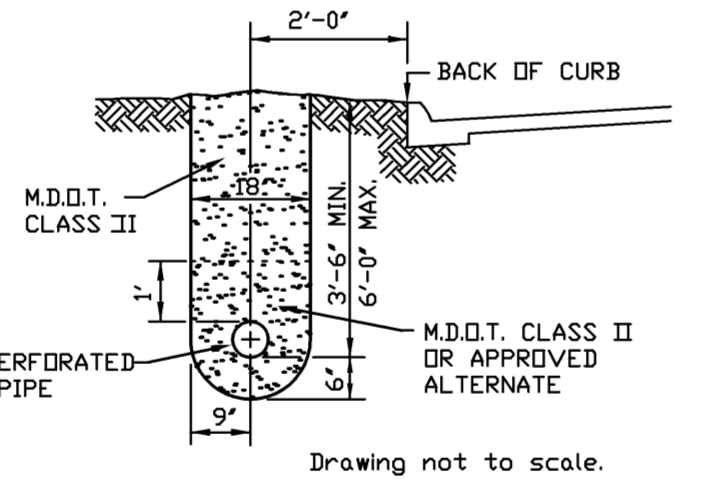
STANDARD REAR YARD CATCH BASIN



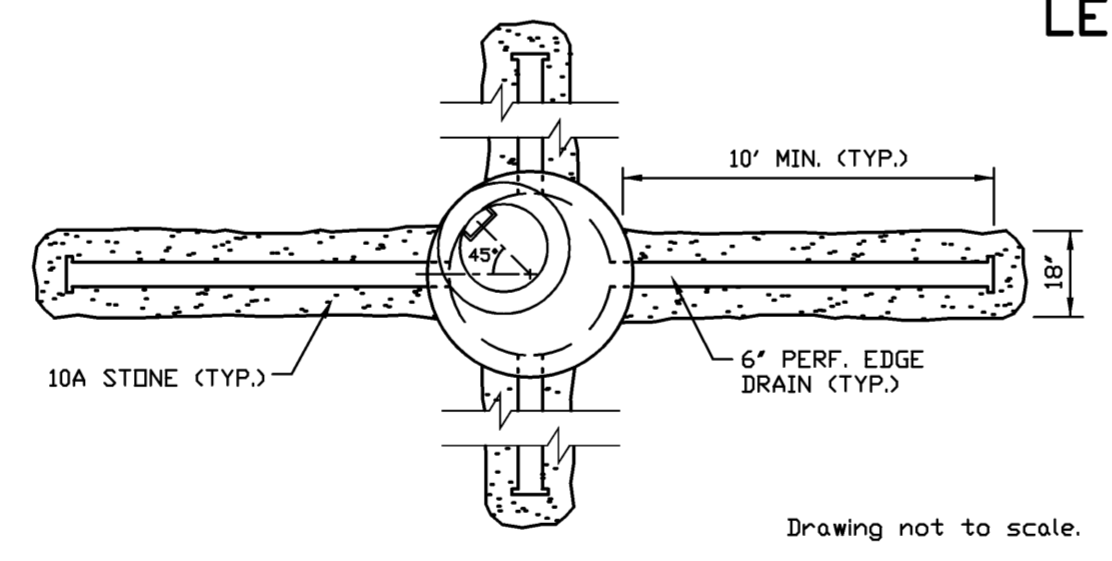
TRAPPED CATCH BASIN



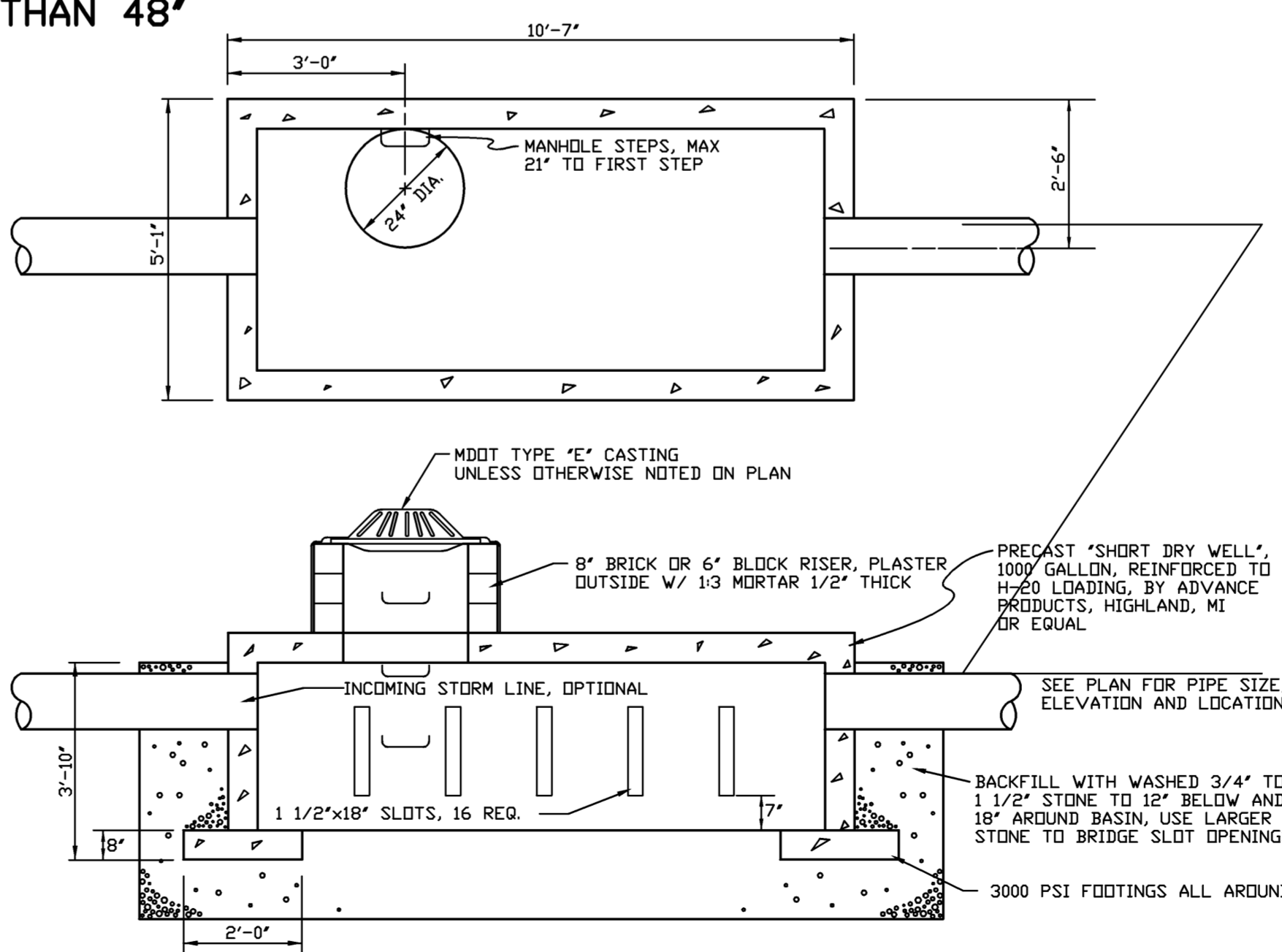
BAR SCREEN DETAIL



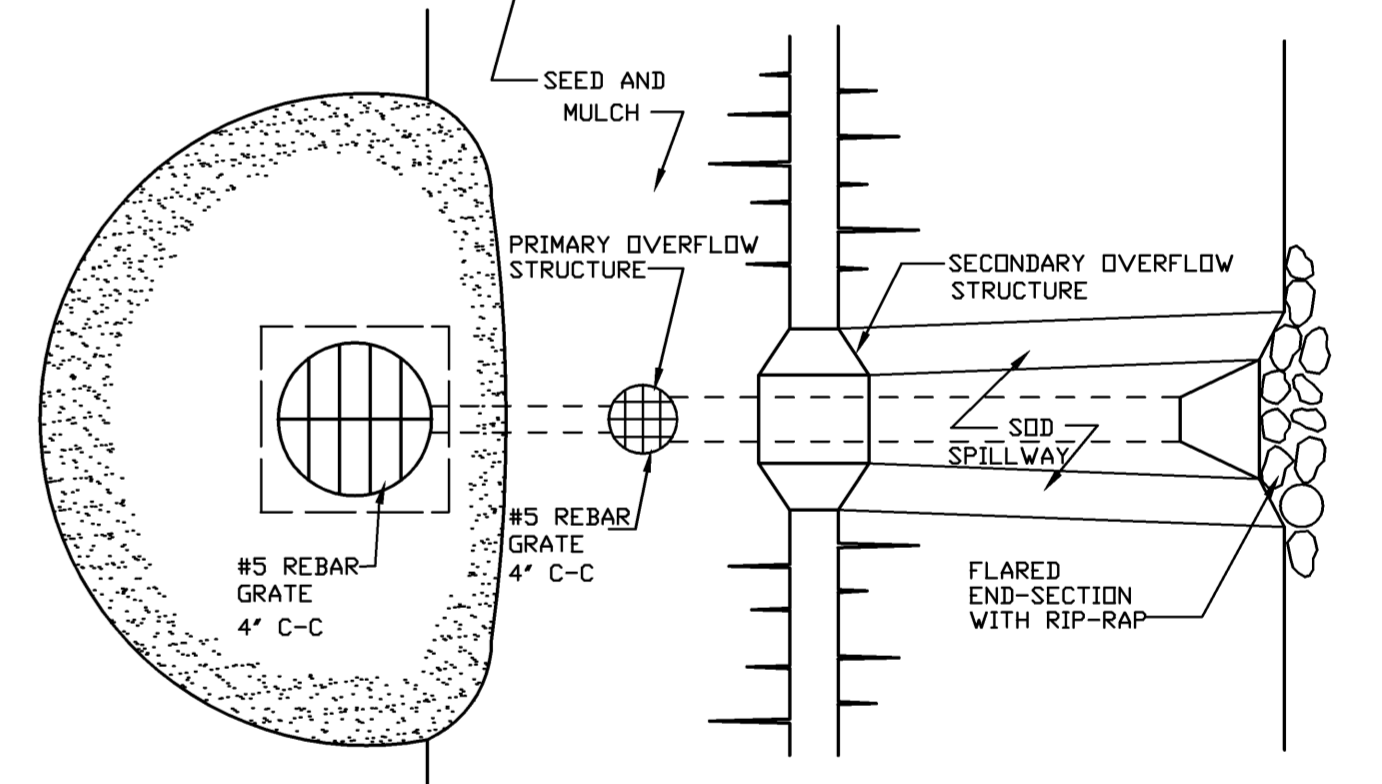
EDGE DRAIN DETAIL



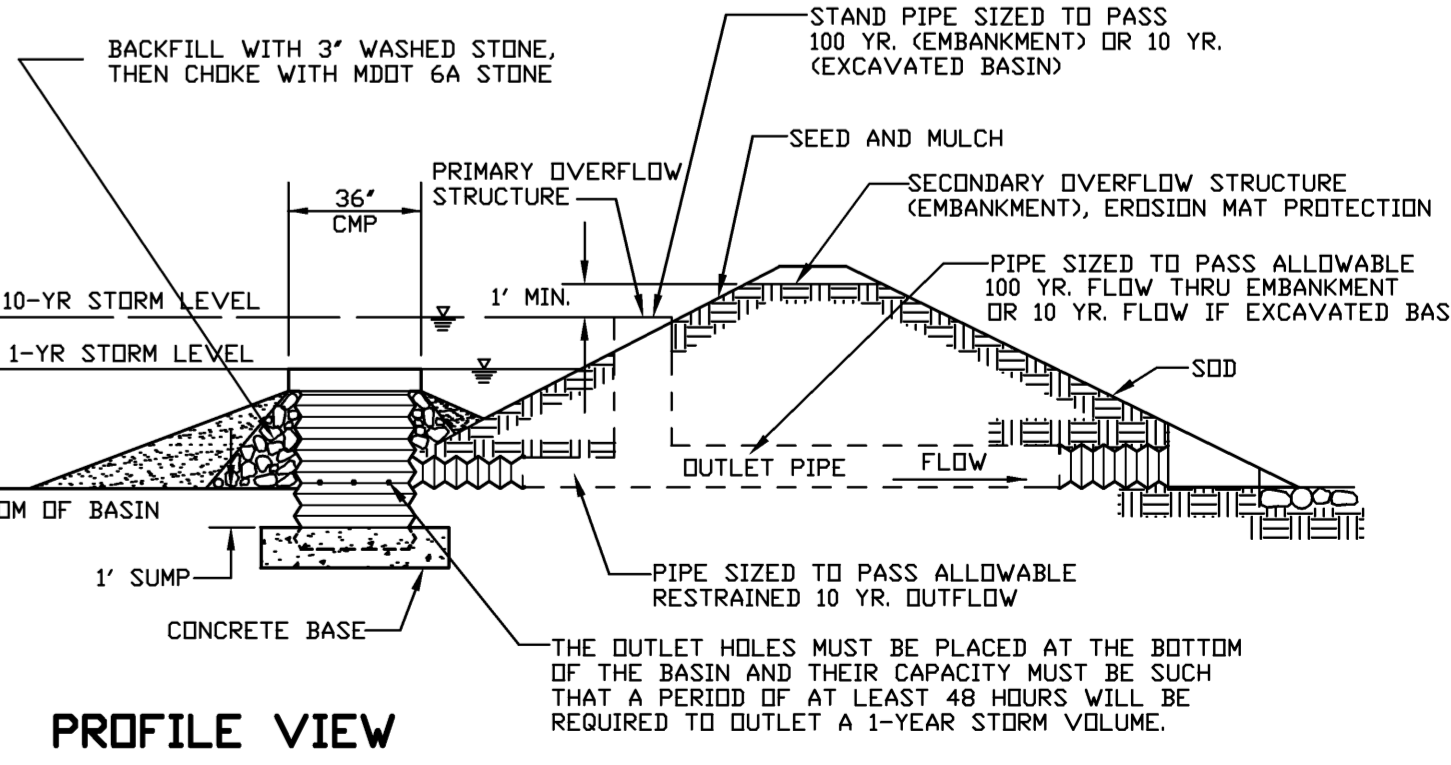
DETAIL  
STANDARD LEACHING BASIN



1000 GALLON LEACHING/SETTLING BASIN

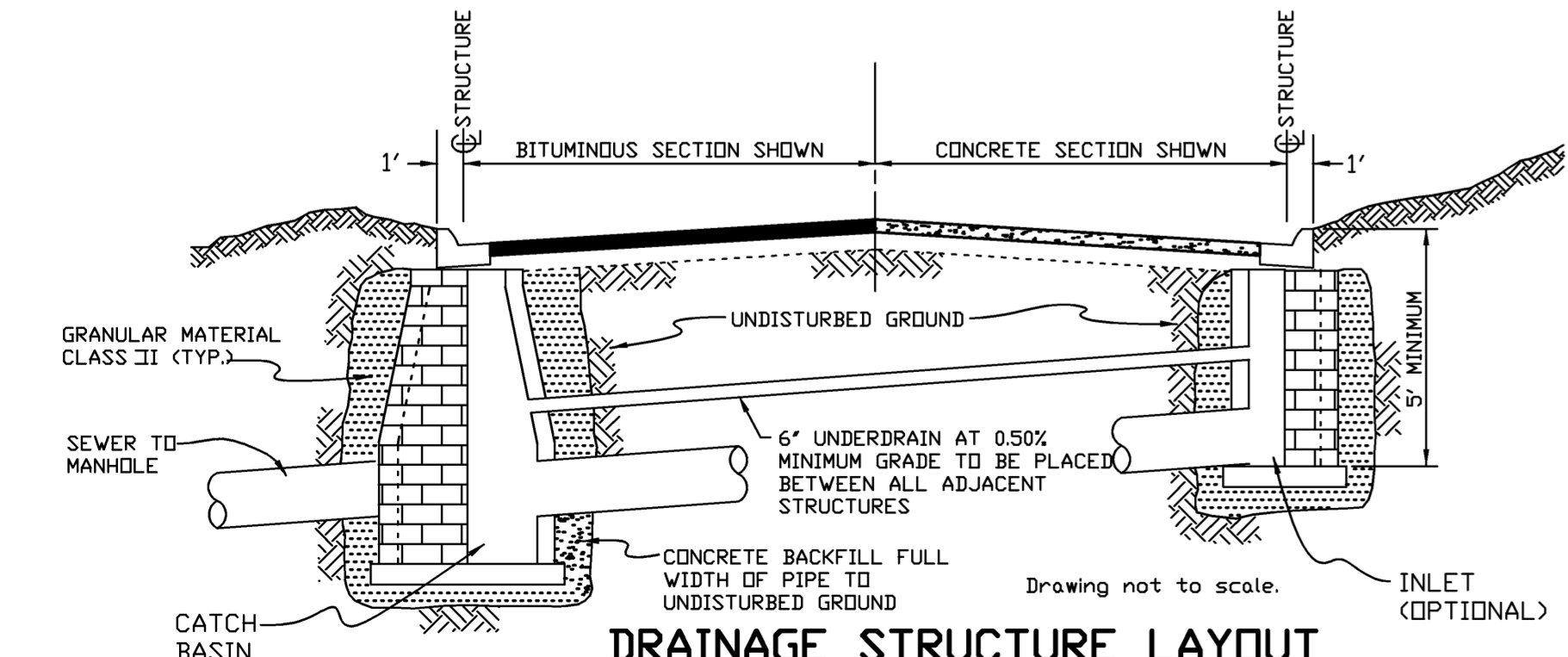


PLAN VIEW



PROFILE VIEW

SO-2 DETENTION BASIN OUTLET FILTER (CMP)  
(SEE ODCD STANDARD DETAILS FOR SEDIMENT BASIN OUTLET STRUCTURE)



DRAINAGE STRUCTURE LAYOUT

REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
		FIRST ISSUE	8-16-99						
		ADD SO-1	6-17-96						
		NEW BAR GRATE	11-3-97						

DRAWN: CAD  
DESIGN: OA  
CHECKED:



**Johnson & Anderson, Inc.**  
CONSULTING ENGINEERS  
4479 DIXIE HIGHWAY  
WATERFORD, MICHIGAN 48329  
(248) 334-9901

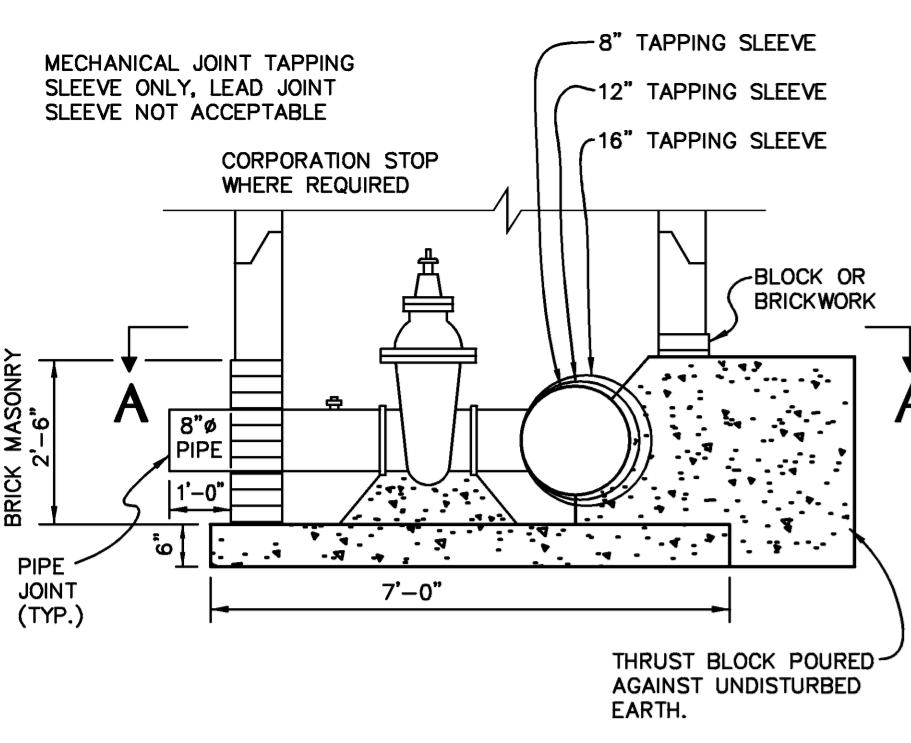
**White Lake Charter Township**  
7525 Highland Road, White Lake, Michigan 48383-2900  
(248) 698-3300

**STORM SEWER  
STANDARD DETAILS**

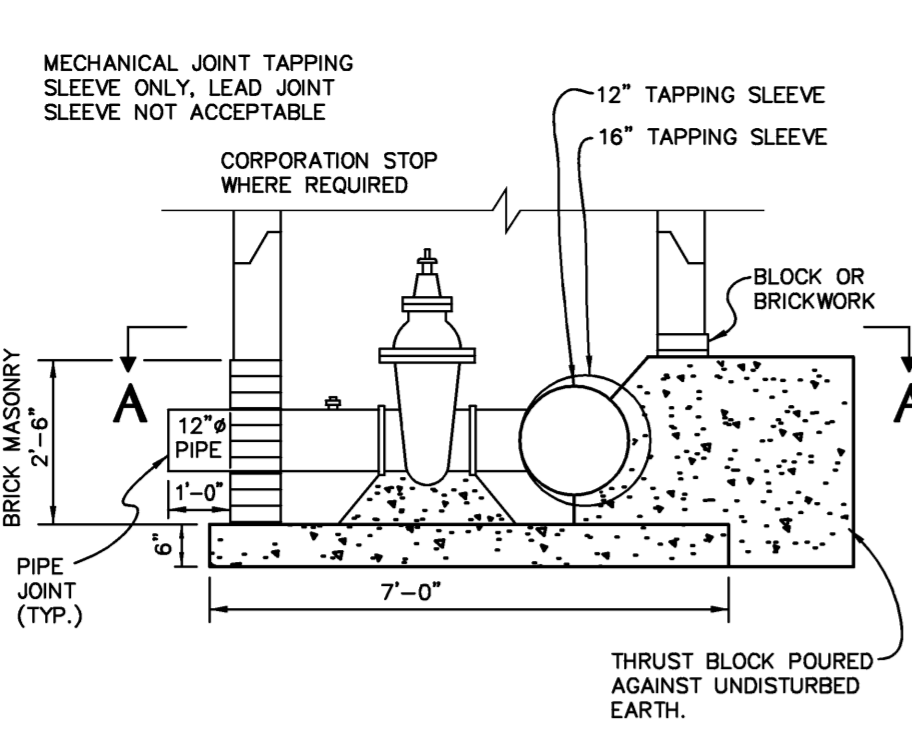
JOB NO.	
DATE ISSUED	
SHEET NO.	89

SCALE: VERT. AS NOTED  
HORZ.

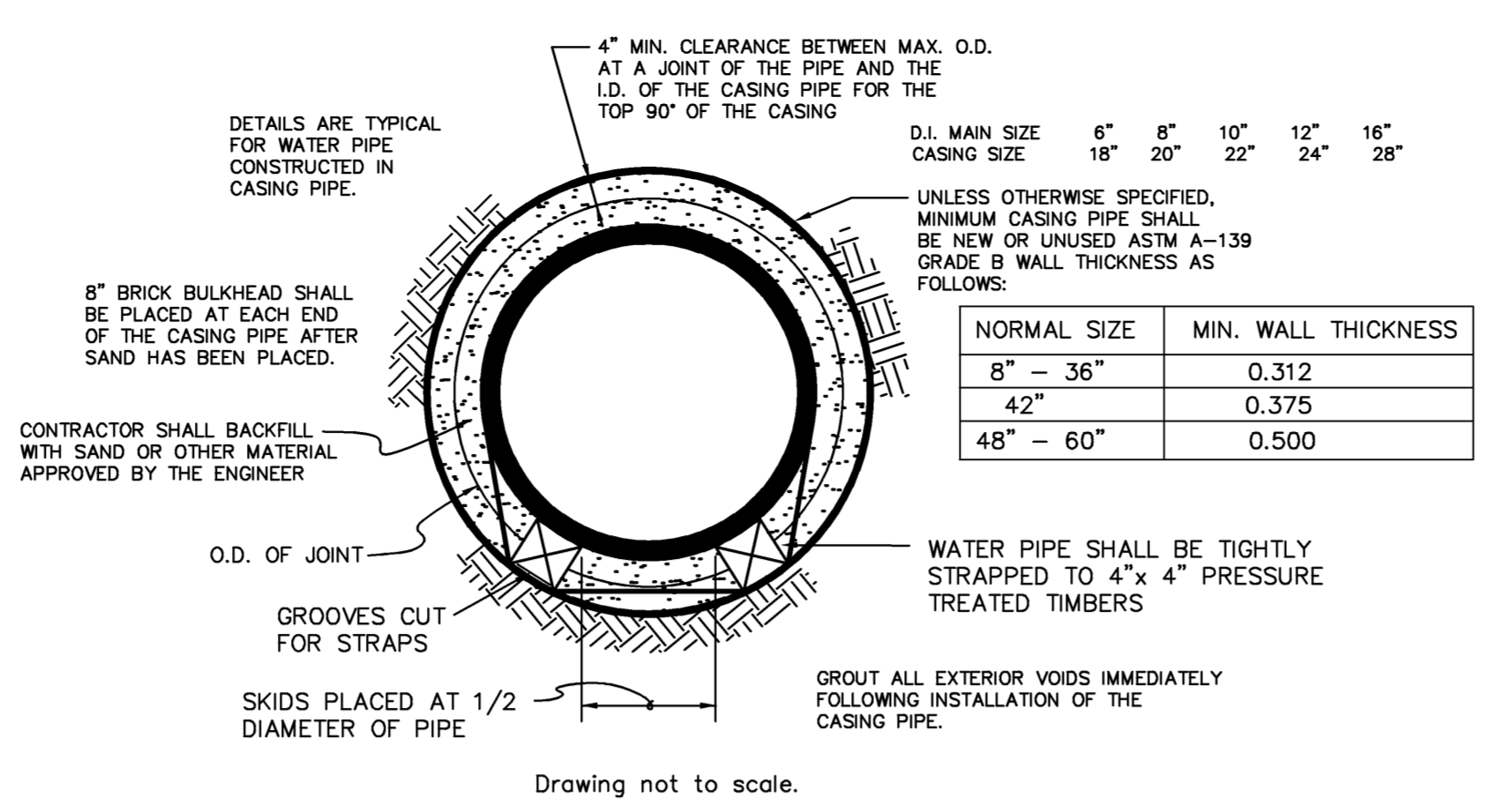
BRD24X36



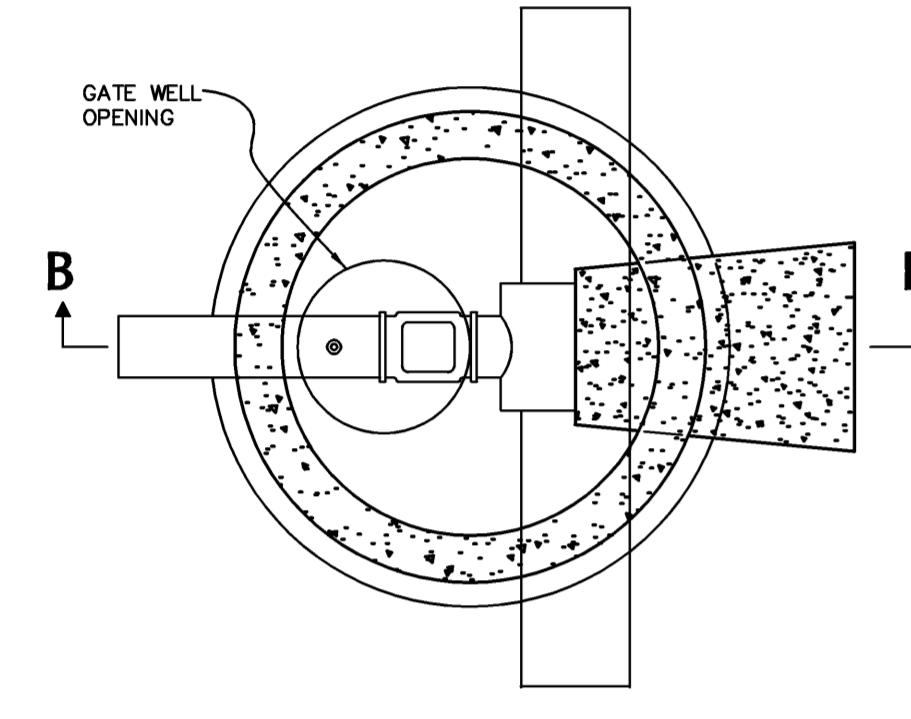
**16" X 8", 12" X 8", 8" X 8" TAPPING SLEEVE, VALVE & WELL (B-B)**



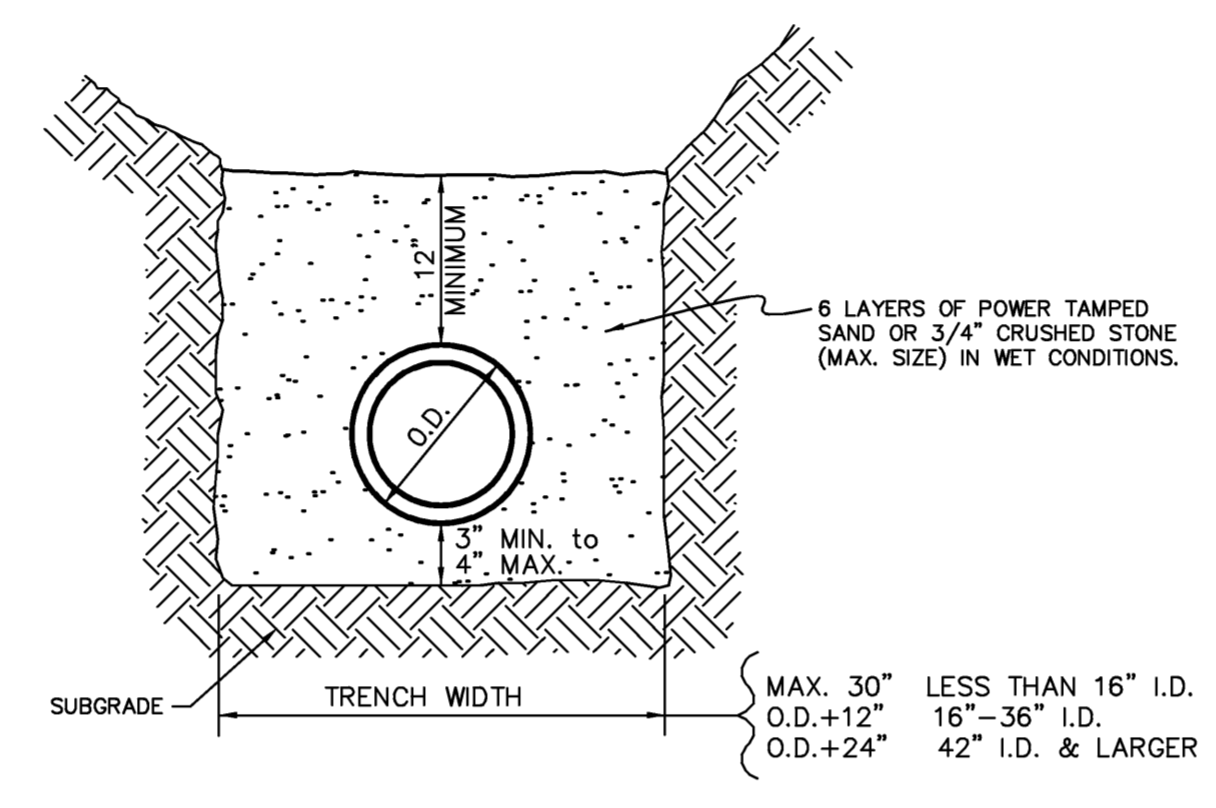
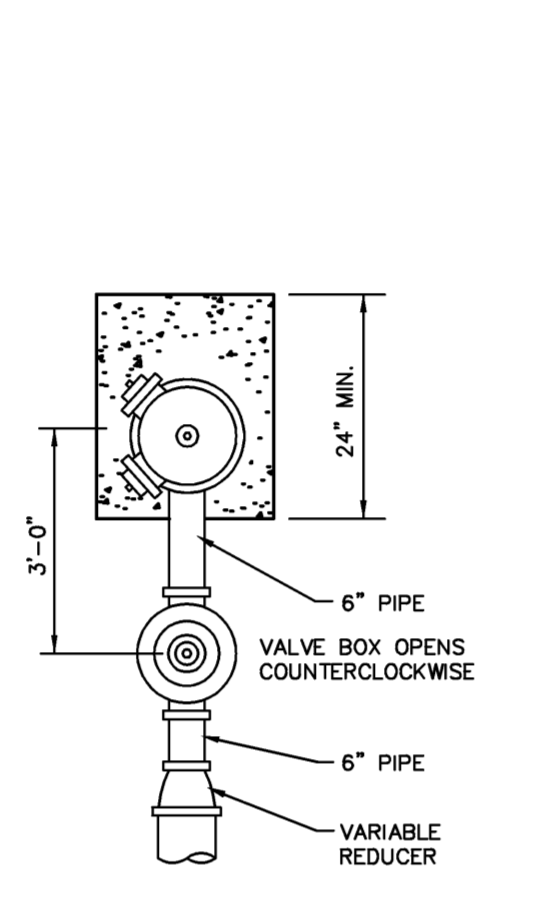
**16" X 12", 12" X 12" TAPPING SLEEVE, VALVE & WELL (B-B)**



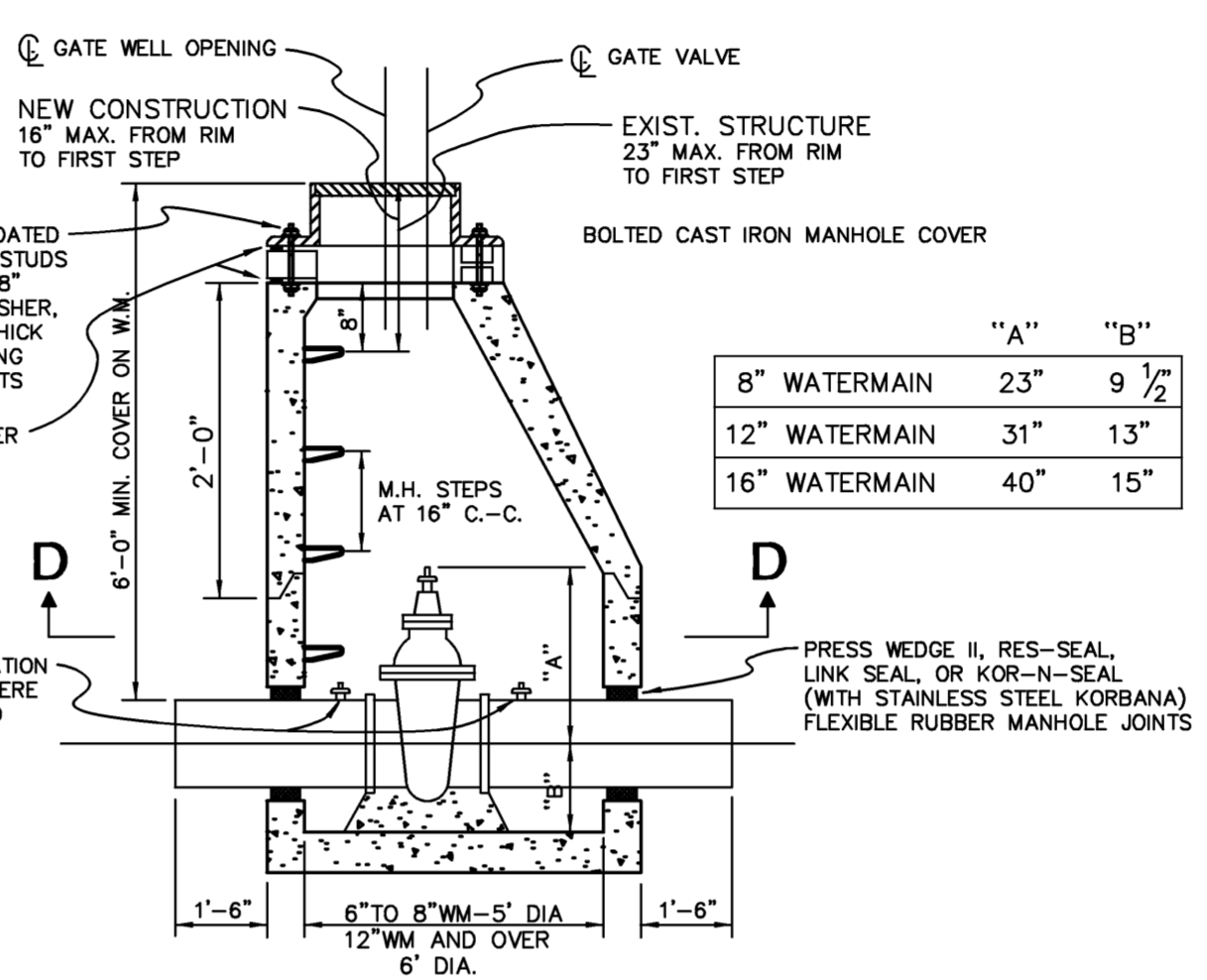
**PIPE BARREL SUPPORT FOR WATERMAIN CONSTRUCTED IN CASING**



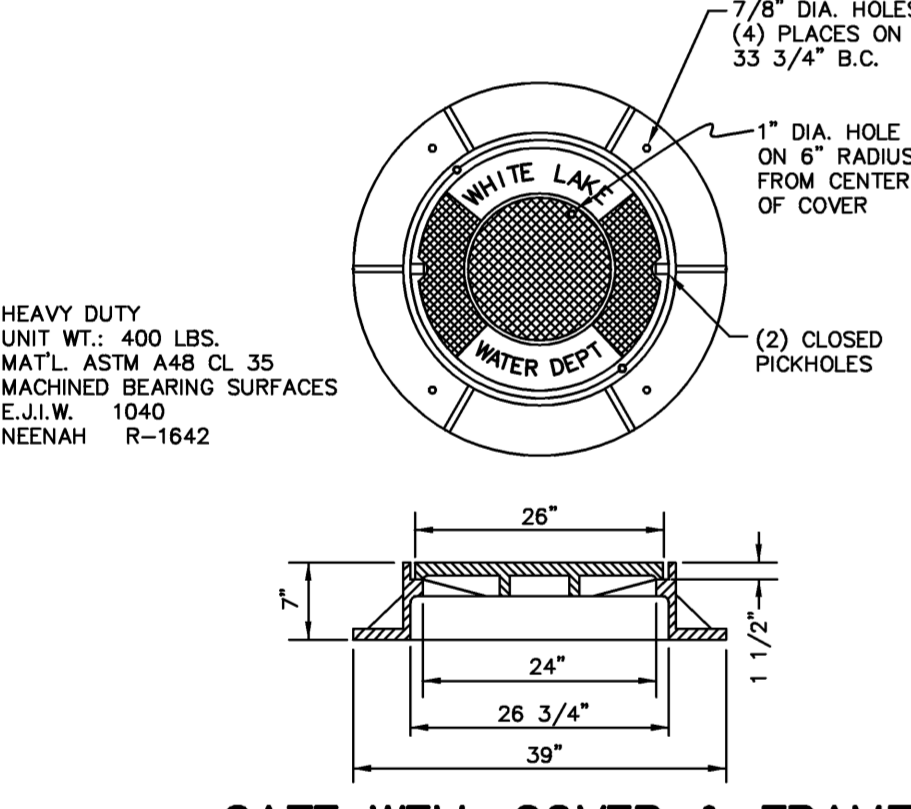
**PLAN TAPPING SLEEVE, VALVE & WELL - TYPICAL (A-A)**



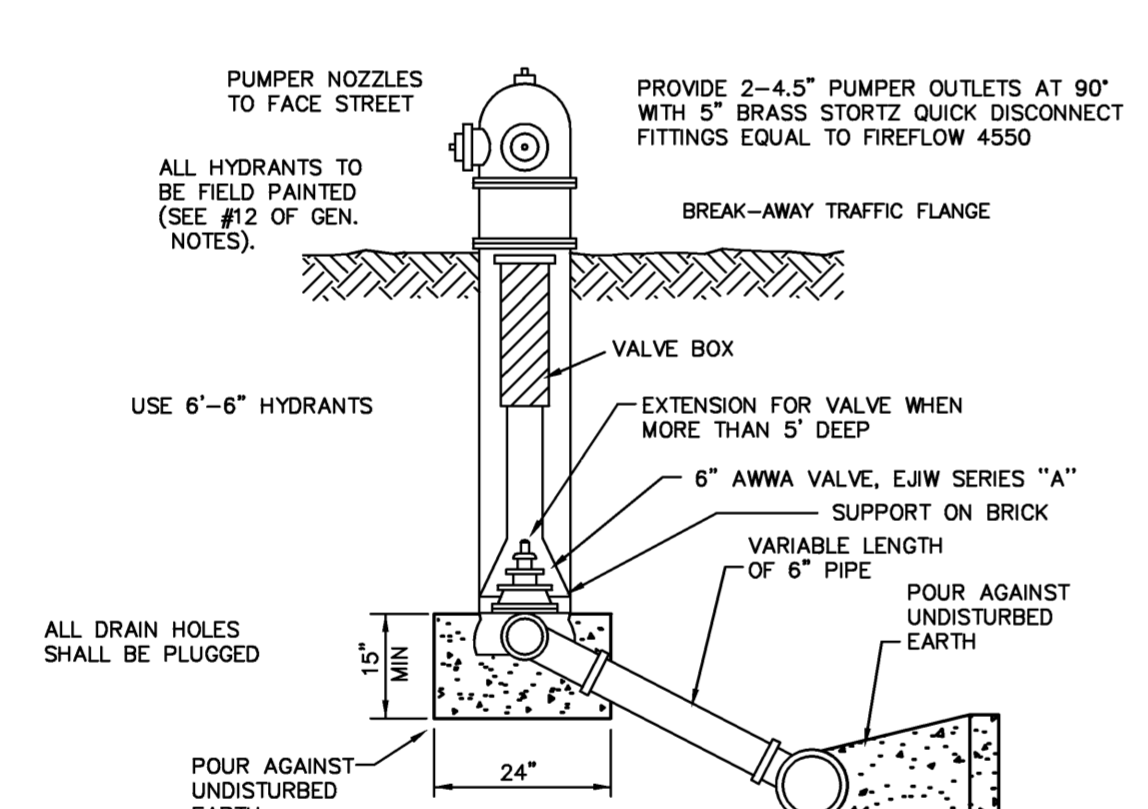
**STANDARD BEDDING FOR WATER PIPE**



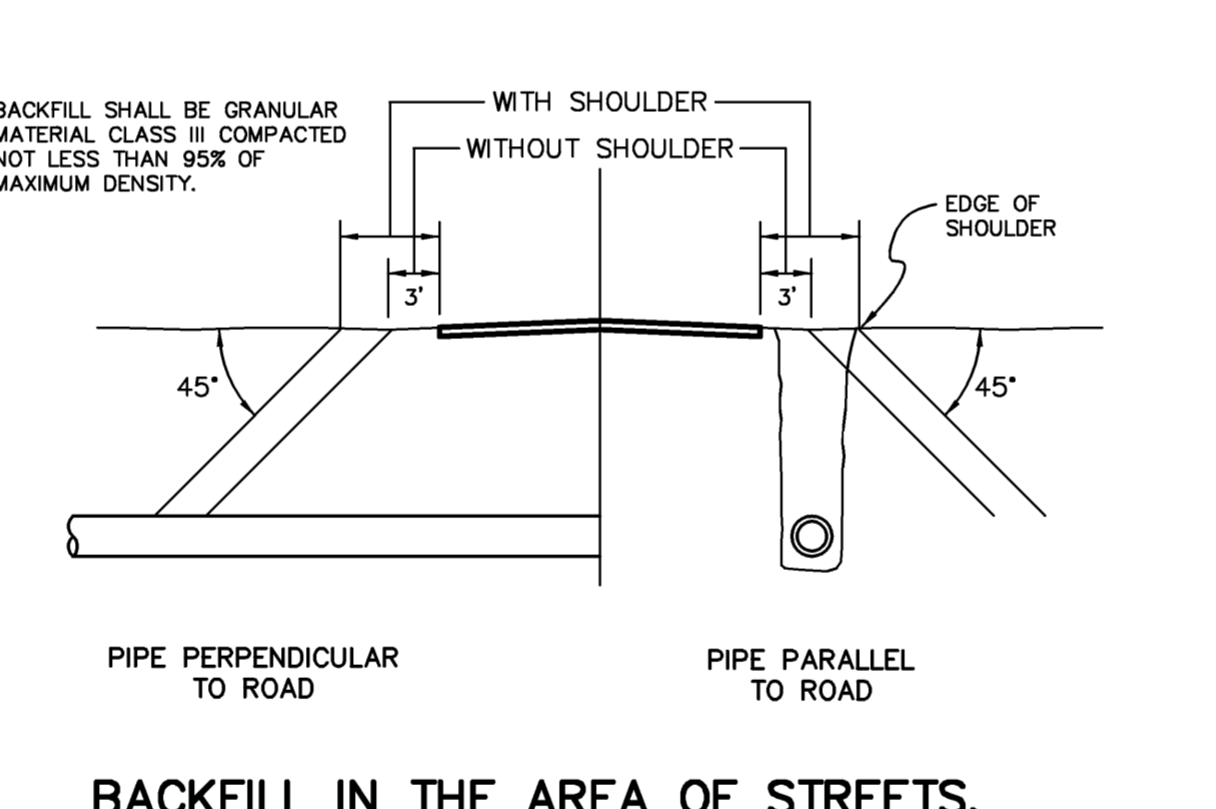
**GATE WELL (C-C)**



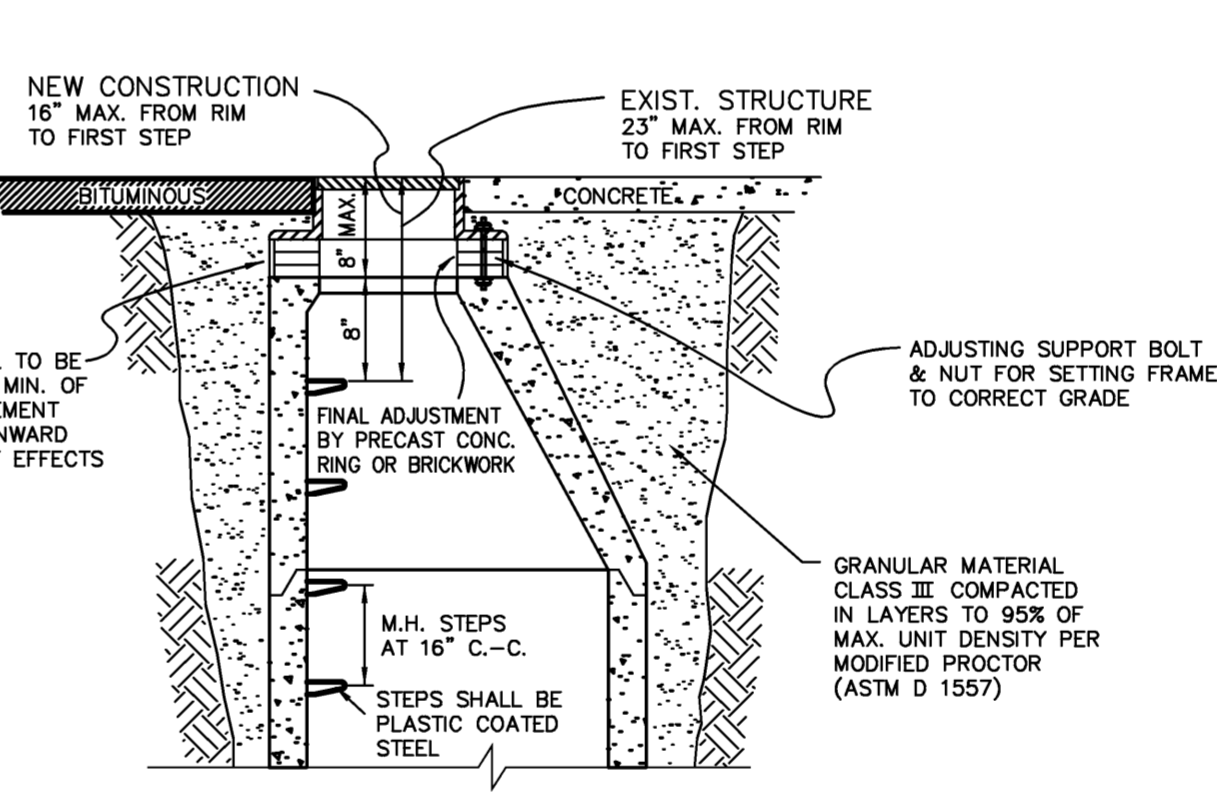
**GATE WELL COVER & FRAME**



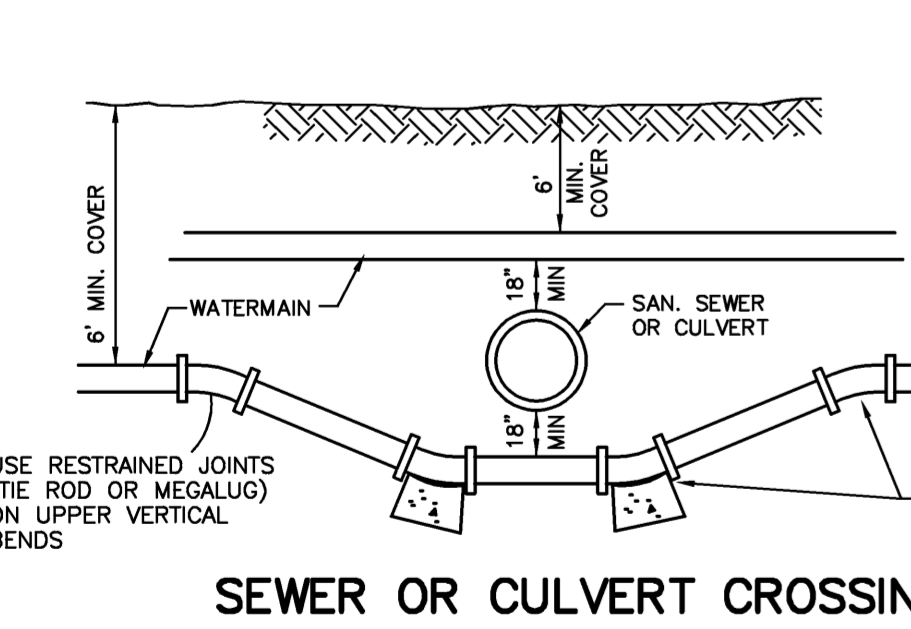
**DETAIL OF HYDRANT SETTINGS**



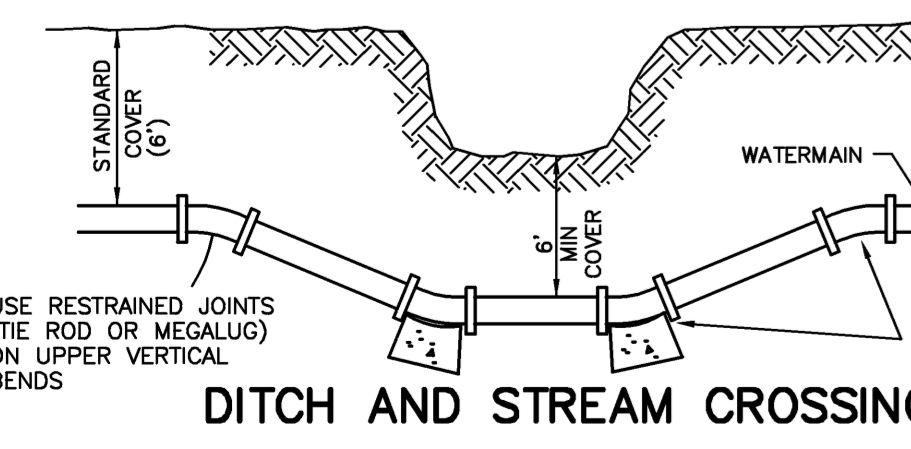
**BACKFILL IN THE AREA OF STREETS, ALLEYS, SIDEWALKS, DRIVES & PARKING AREAS**



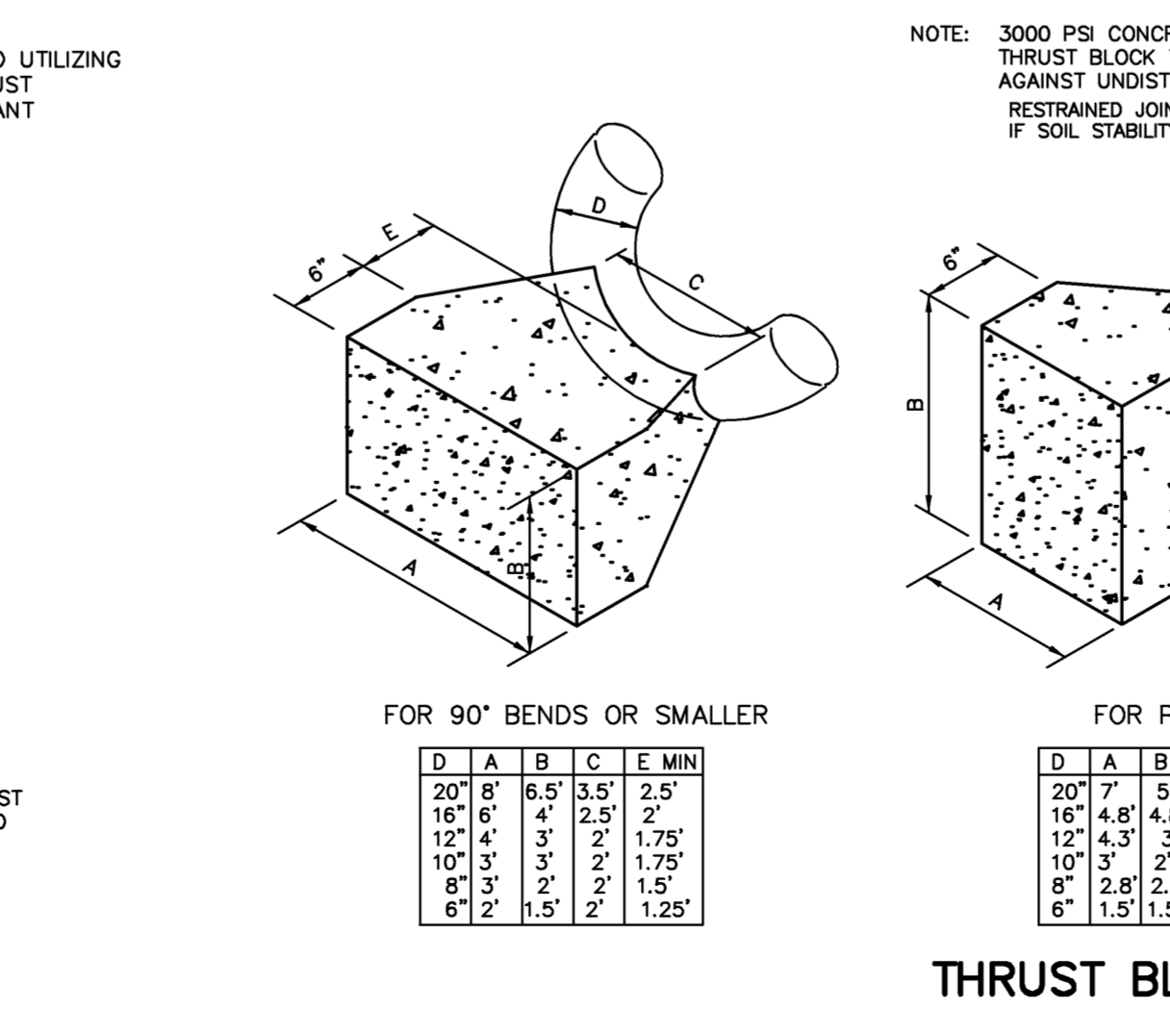
**GATE WELL TOPS WITHIN PAVEMENT AREAS**



**SEWER OR CULVERT CROSSING**

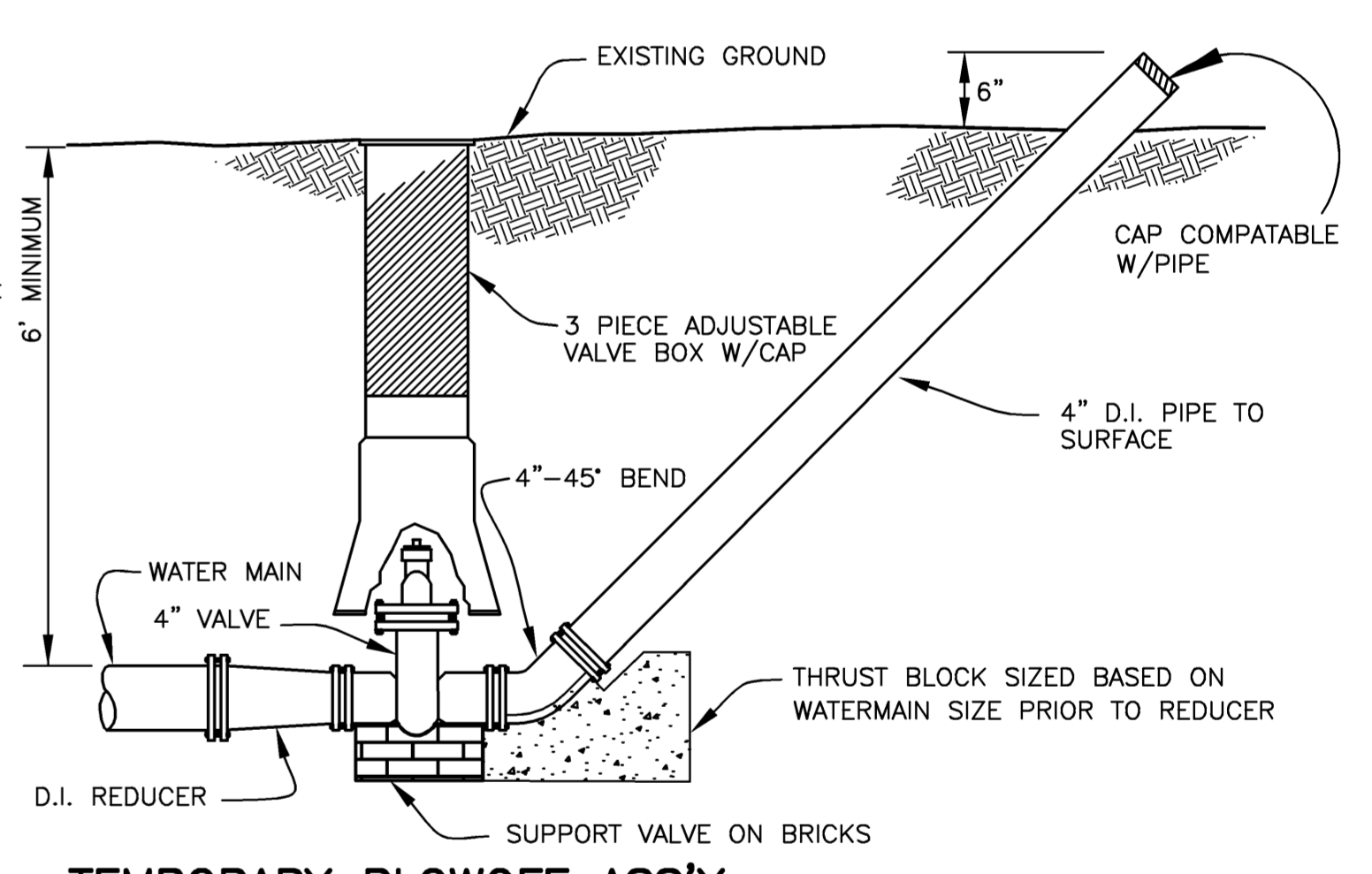


**DITCH AND STREAM CROSSING**

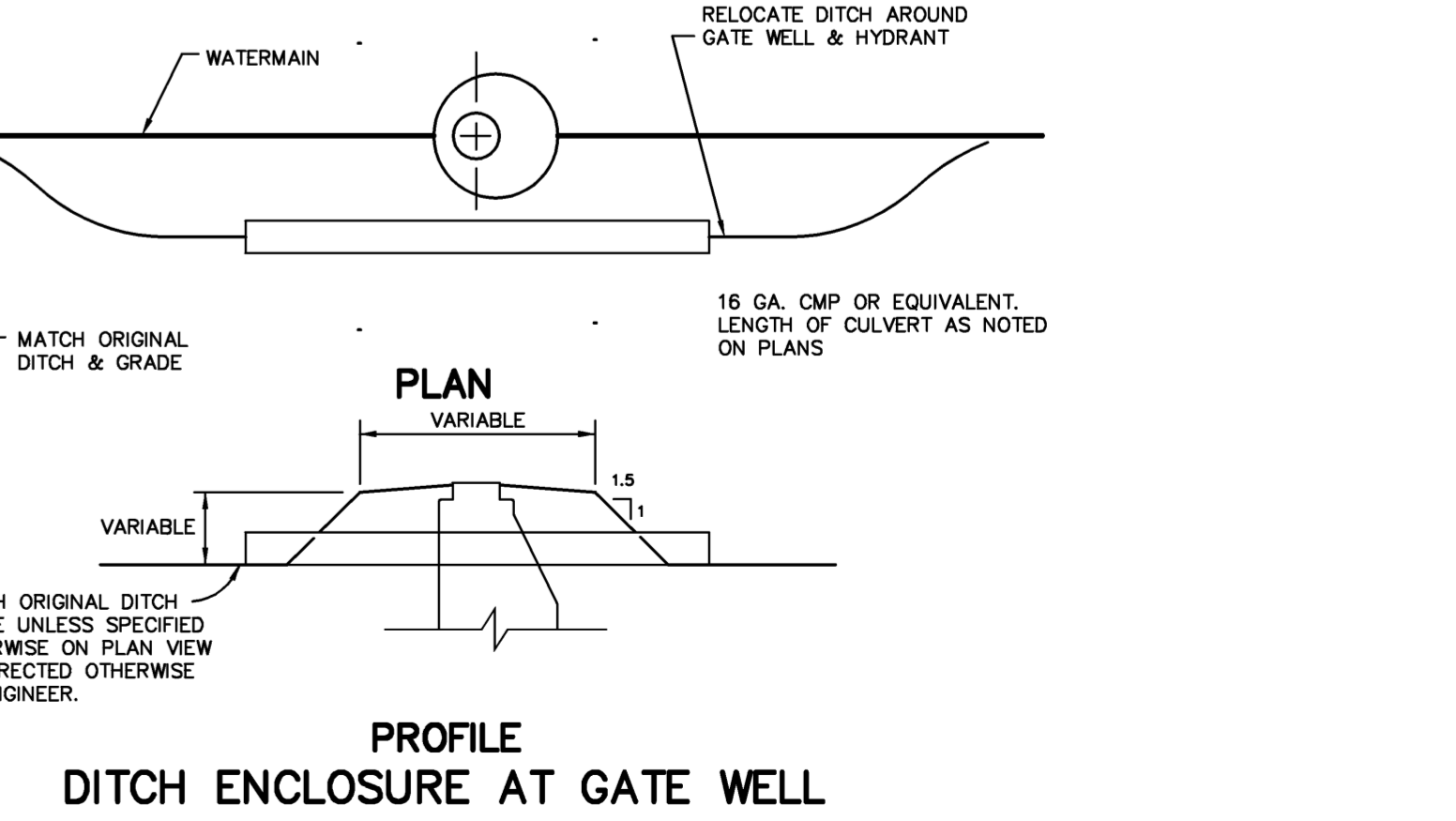


**THRUST BLOCK DETAILS**

- WATER MAIN NOTES**
- All construction procedures and materials used on this project shall conform to White Lake Township current standards and specifications.
  - All hydrants shall be East Jordan Iron Works 5-BR-XT traffic model. Self-draining hydrants shall not be used. Valve shall open counter-clockwise. Provide 2-4.5" pumper outlets with "Fire Flow Nozzle" model 4550 as manufactured by RLS Group, Inc. with 1-1/2" pentagon nuts. Caps to be color coded with a reflective sticker, color corresponding to NFPA 291 guidelines.
  - All watermains shall be ductile iron pipe Class 54, cement lined with push on joints. Mechanical joints allowed only for tapping sleeves, hydrants & hydrant valves. All joints at bends, tees, valves and hydrants shall have a poured concrete thrust block as detailed on this sheet. Joints which have thrust blocks bearing on soil of questionable stability shall be fully restrained utilizing Tyler swivel ells and adapters or a system approved by the Township Engineer.
  - Tapping sleeve shall be mechanical joint or approved equal. Leaded jointed sleeve shall not be used.
  - Specifications shall include direction of operation of all valves. All valves shall be counter clockwise open.
  - All necessary easements shall be provided in the name of White Lake Township before acceptance of the water distribution system.
  - The design engineer shall furnish White Lake Township with one reproducible sets of "As-Built" watermain plans or an AutoCAD file upon completion of the job.
  - All required cross-connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Public Health.
  - Gate well frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #R-1642 Manhole frame, solid lid cover shall be non-rocking and marked "White Lake Water Department"
  - All gate valves with operating nuts greater than 5' below ground surface shall be provided with an extension stem. The length of the extension shall be such that it will be within 5' of the ground surface when an extension is used it shall be held in place by an extension stem guide suitably fastened to the wall of the gate well.
  - 1" corporation stops are to be placed at such locations as may be required by the engineer.
  - All hydrants shall be painted federal red polyurethane or alkyd gloss enamel. A round sticker, color coded per NFPA guidelines via a flow test or as determined by the Township Engineer from a computer model, shall be affixed to one nozzle cap of each hydrant.
  - All pipe and fittings shall be subjected to a hydro-static pressure test of 150 PSI for a 2 hour duration; Township Engineer must be present. Maximum segment 2000 feet except that longer segments may be tested with allowable leakage based on 2000 feet.
  - 2 consecutive safe bacteria samples shall be taken from the water system approx. 24 hours apart at points established by the Township Engineer. Samples shall be taken by the Township Engineer.
  - Filling, flushing and sampling of watermain can only be performed with a "Jumper" Line, maximum 1" diameter. The jumper shall be equipped with an approved RPZ type of backflow preventer.
  - Adjustments on gate wells and sanitary manholes shall be limited to 23" maximum from top of rim to first step in accordance with MIOSHA Rule 341.
  - Service leads shall be 1" minimum size, Copper type "K" and shall be installed with stop box to the property line prior to acceptance of the water main. Stop shall be 1" regular pattern ball valve equivalent A. Y. McDonald Mfg. 6100 Flare. Curb box shall have 1" riser pipe with 2 hole Erie pattern cover equivalent to A. Y. McDonald 5601L. Stop box shall be protected with a 2"x4" painted blue extending 4 feet above ground.
  - Standard pipe cover shall be 6'-0".



**TEMPORARY BLOWOFF ASS'Y**



**DITCH ENCLOSURE AT GATE WELL**

BRD24X36

DRAWN: GAP  
 DESIGN: OA  
 CHECKED:

REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
		GENERAL REVISION TO CAD	12-29-99		GW & NUT SIZE	7-23-98		CLARIFY HYD SPEC	2-7-01
		ADD NOTE IT	11-4-97		PIPE COVER & FLANGE TAPE	12-12-99		5-BR HYD. WS STAKE	2-27-02
		REVISE HYD & THRUSTING	5-18-98		ADD BLOWOFF	7-6-99			

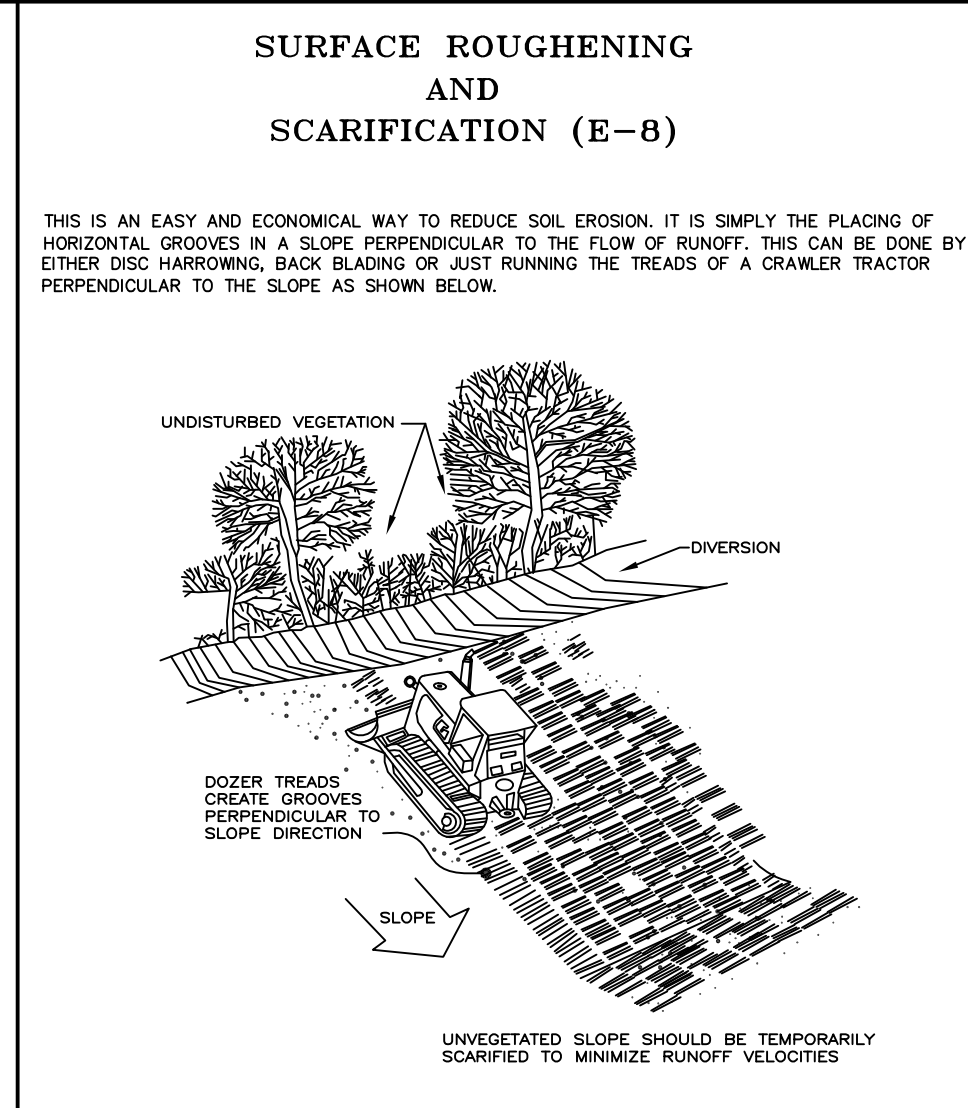
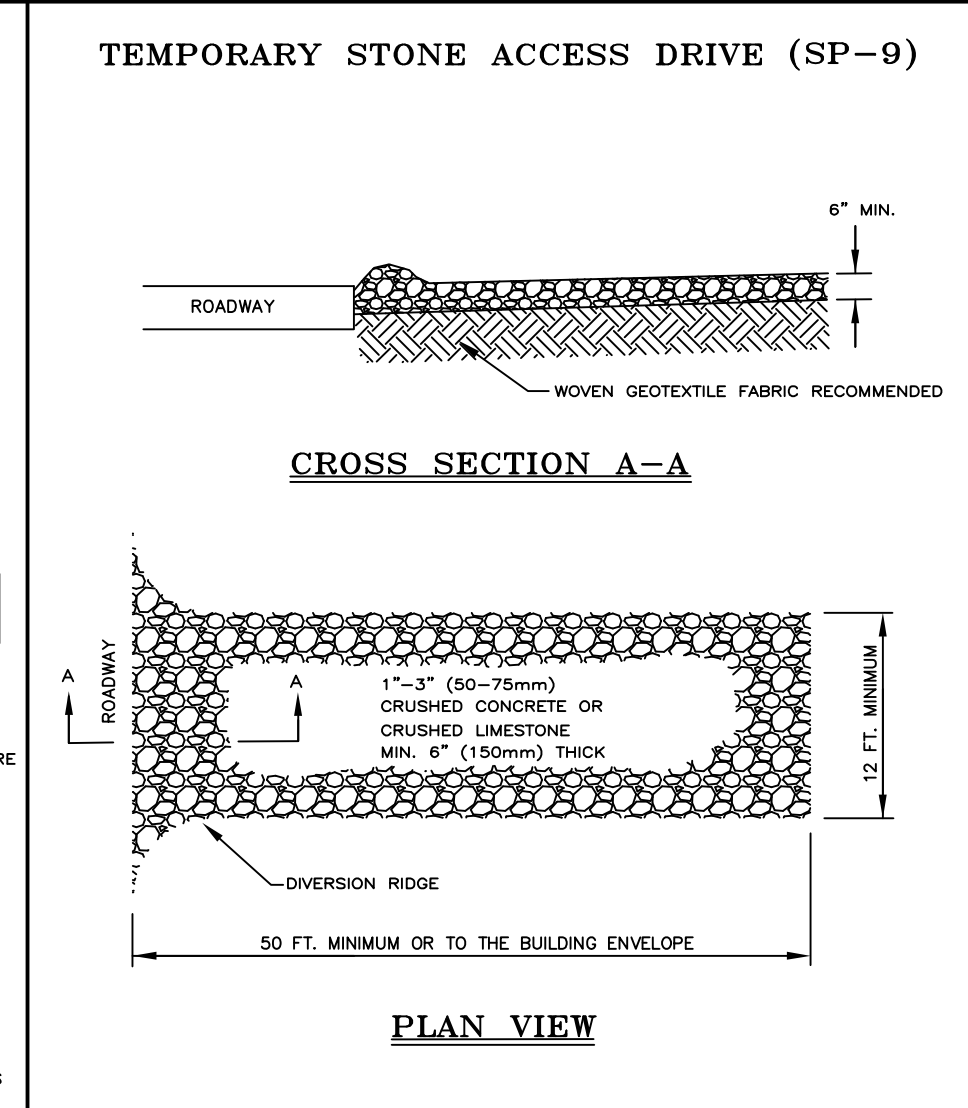
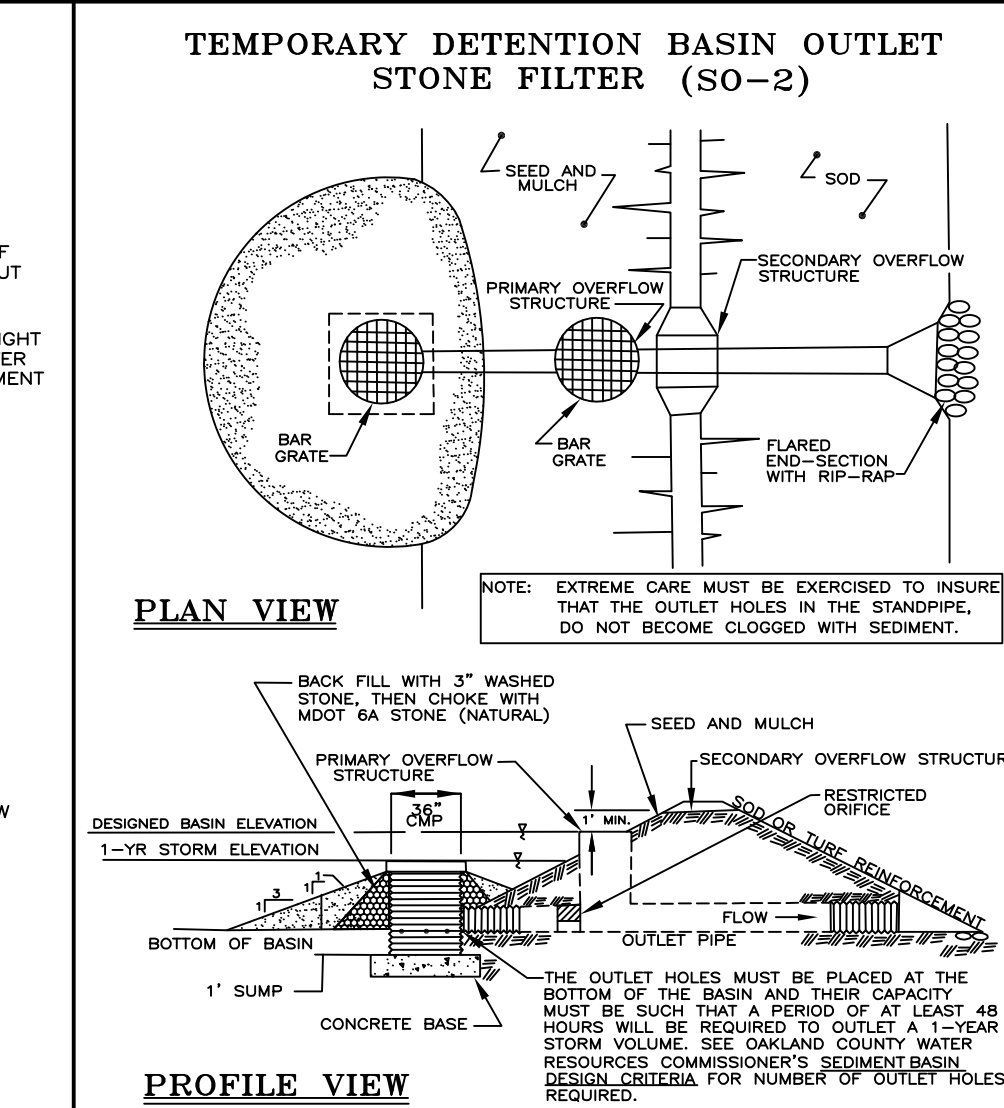
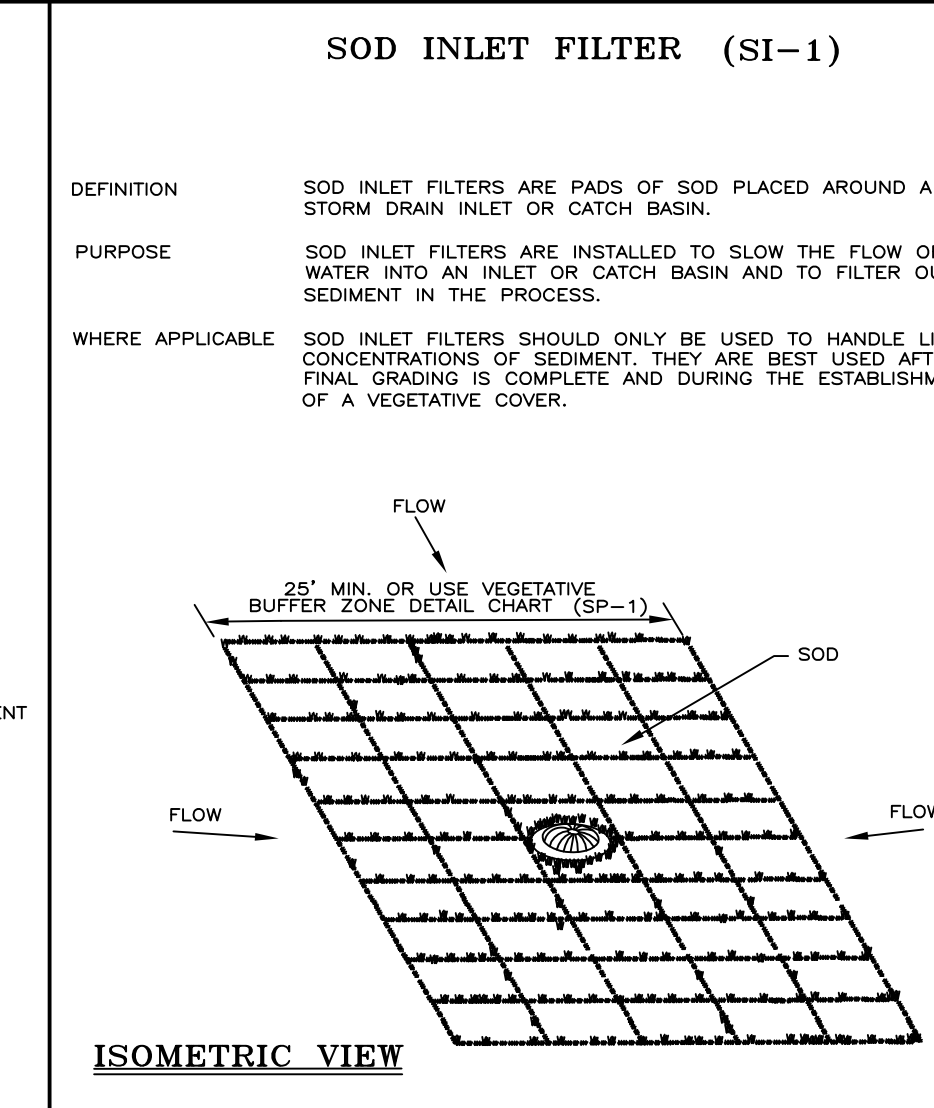
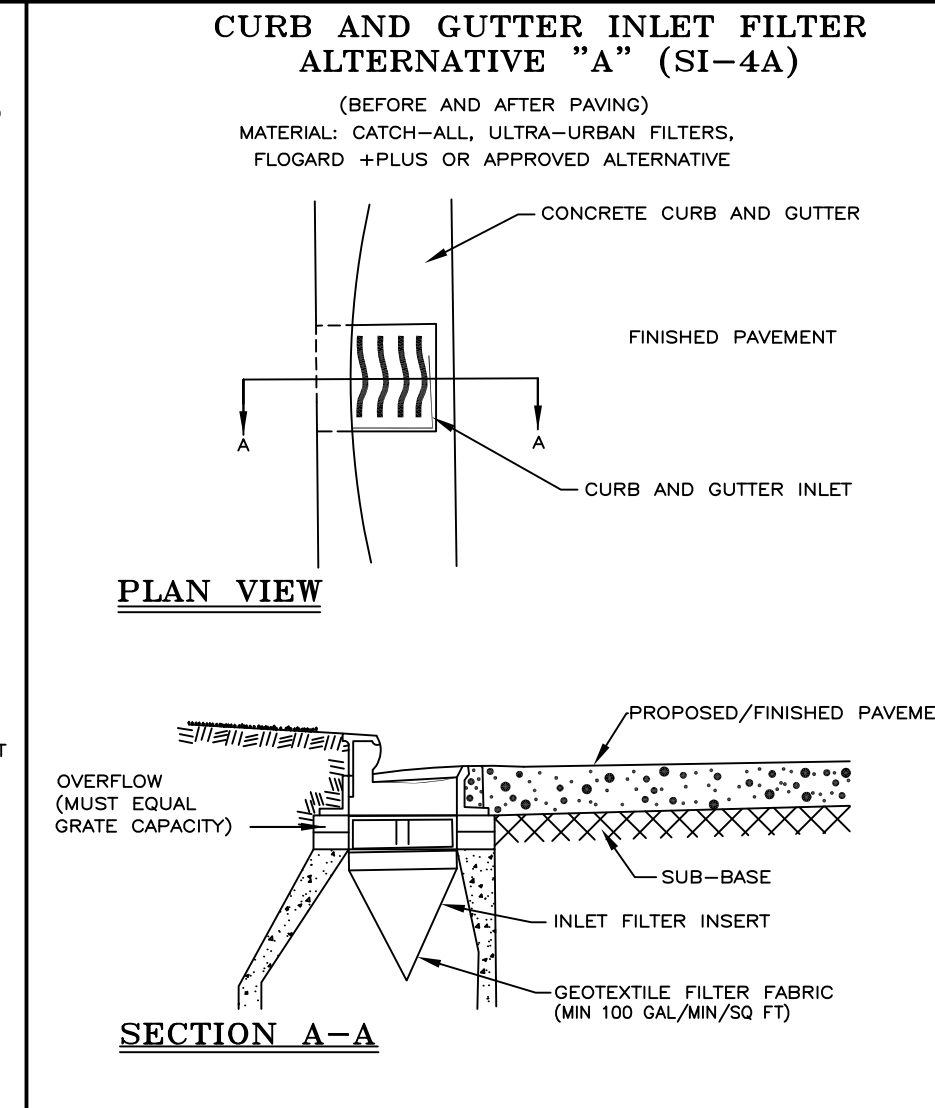
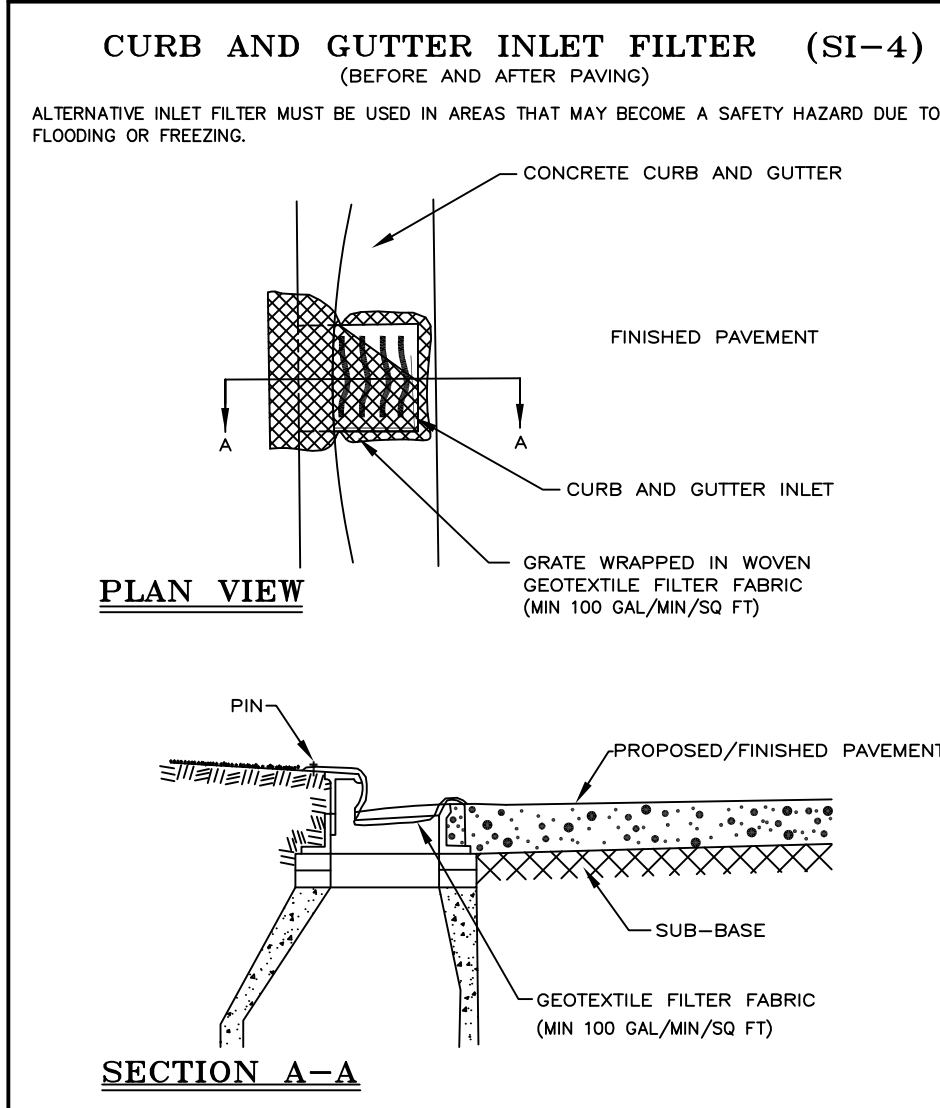
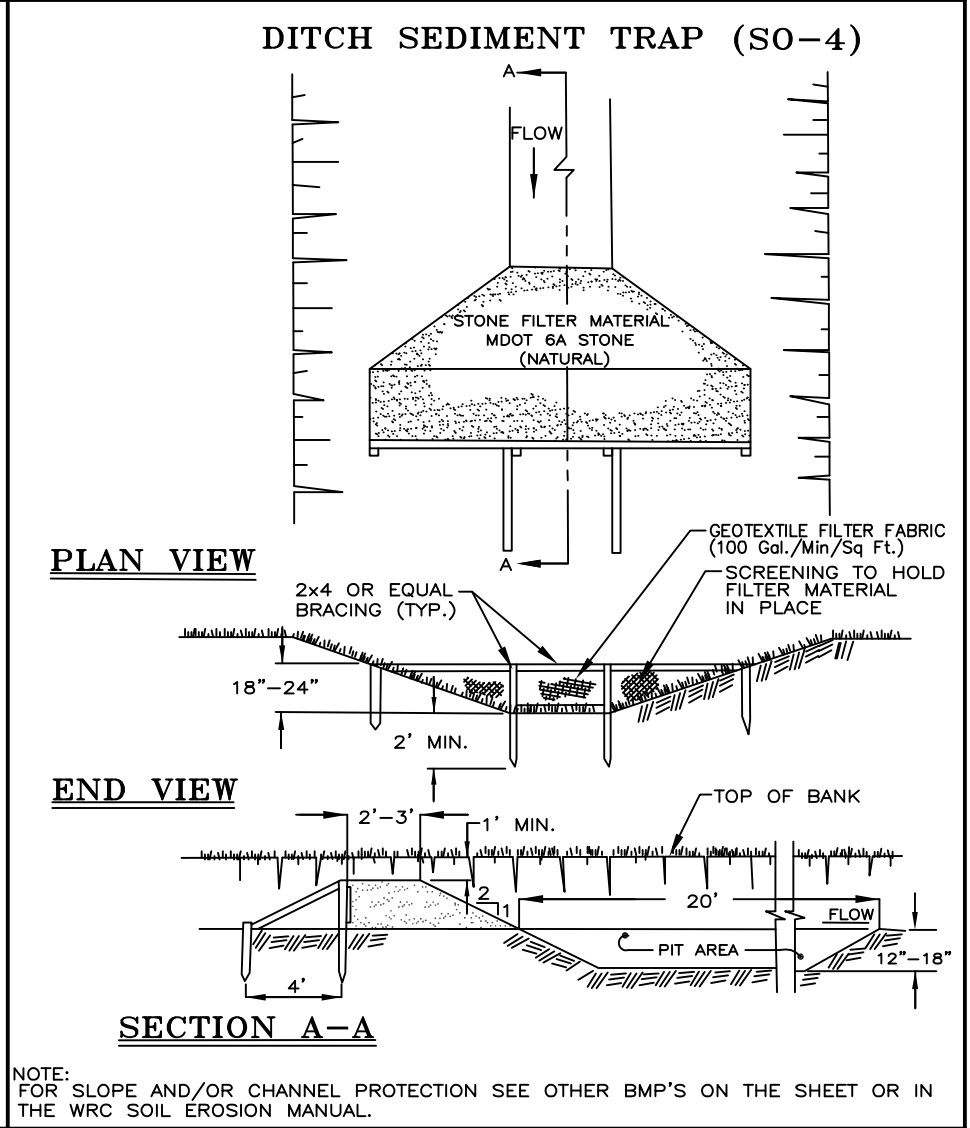
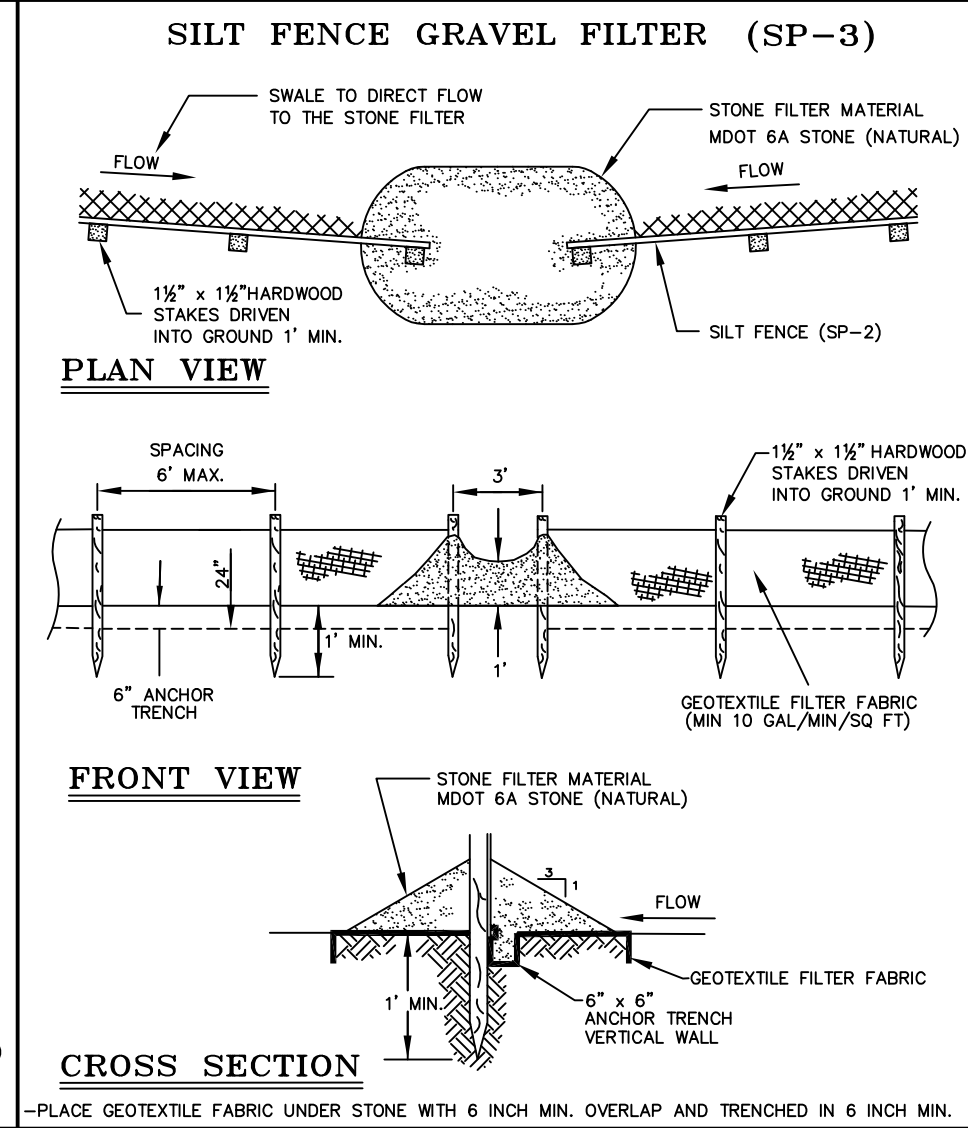
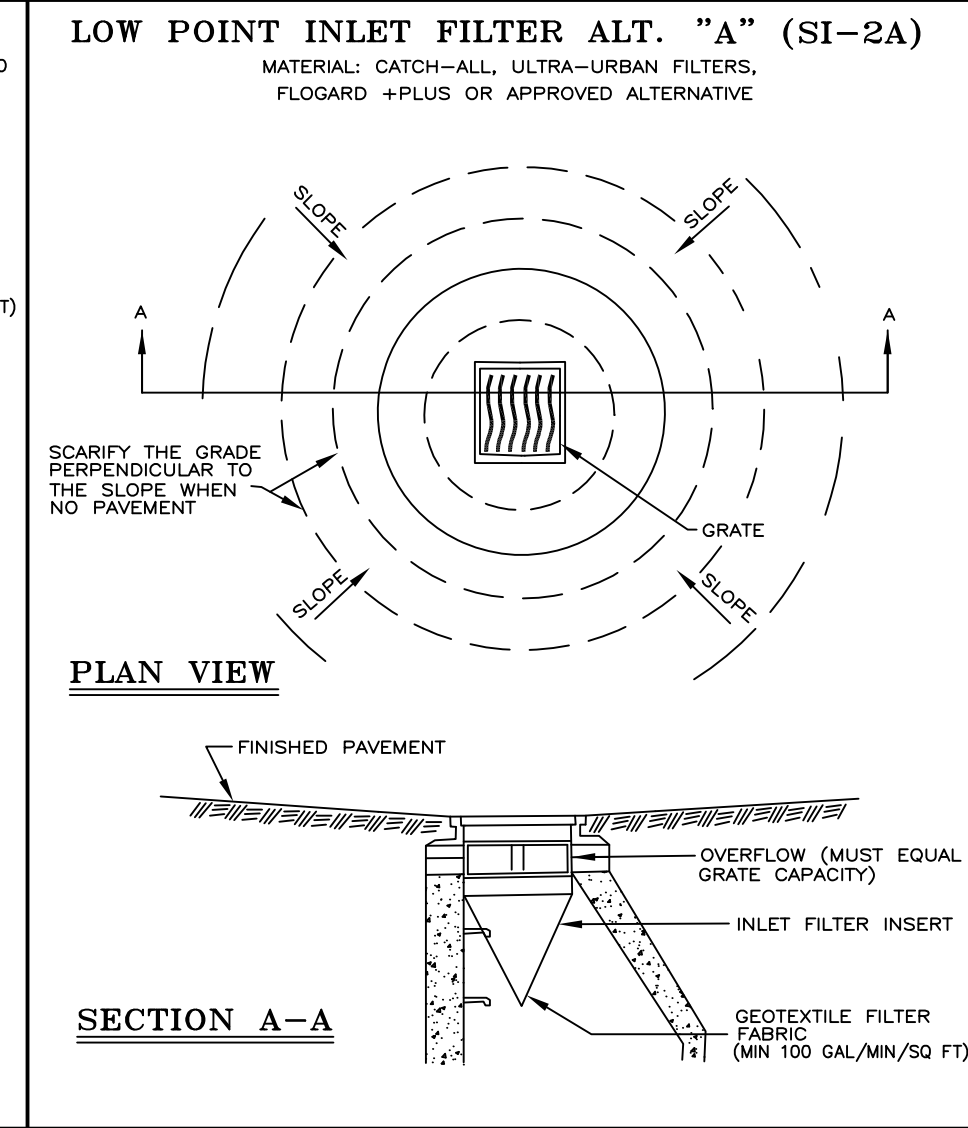
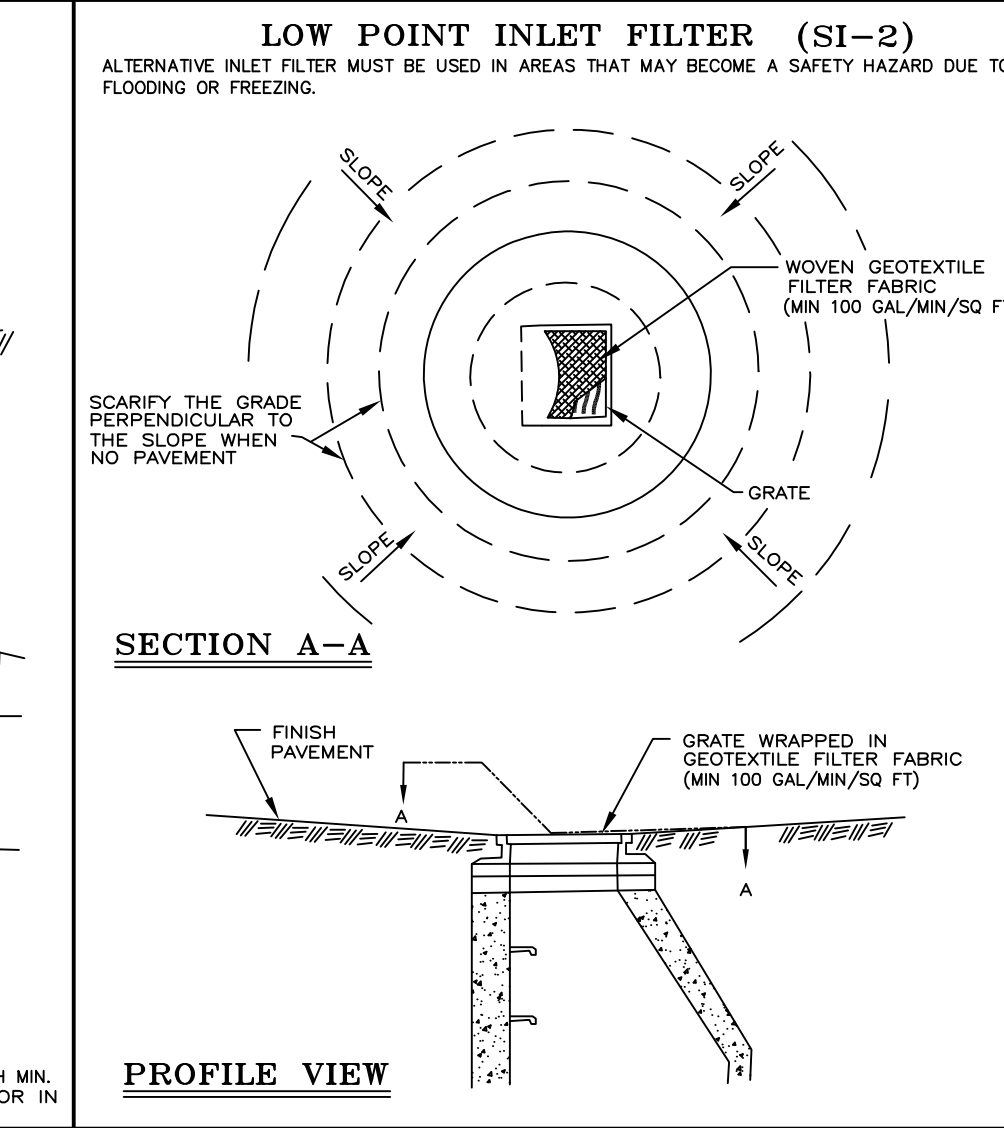
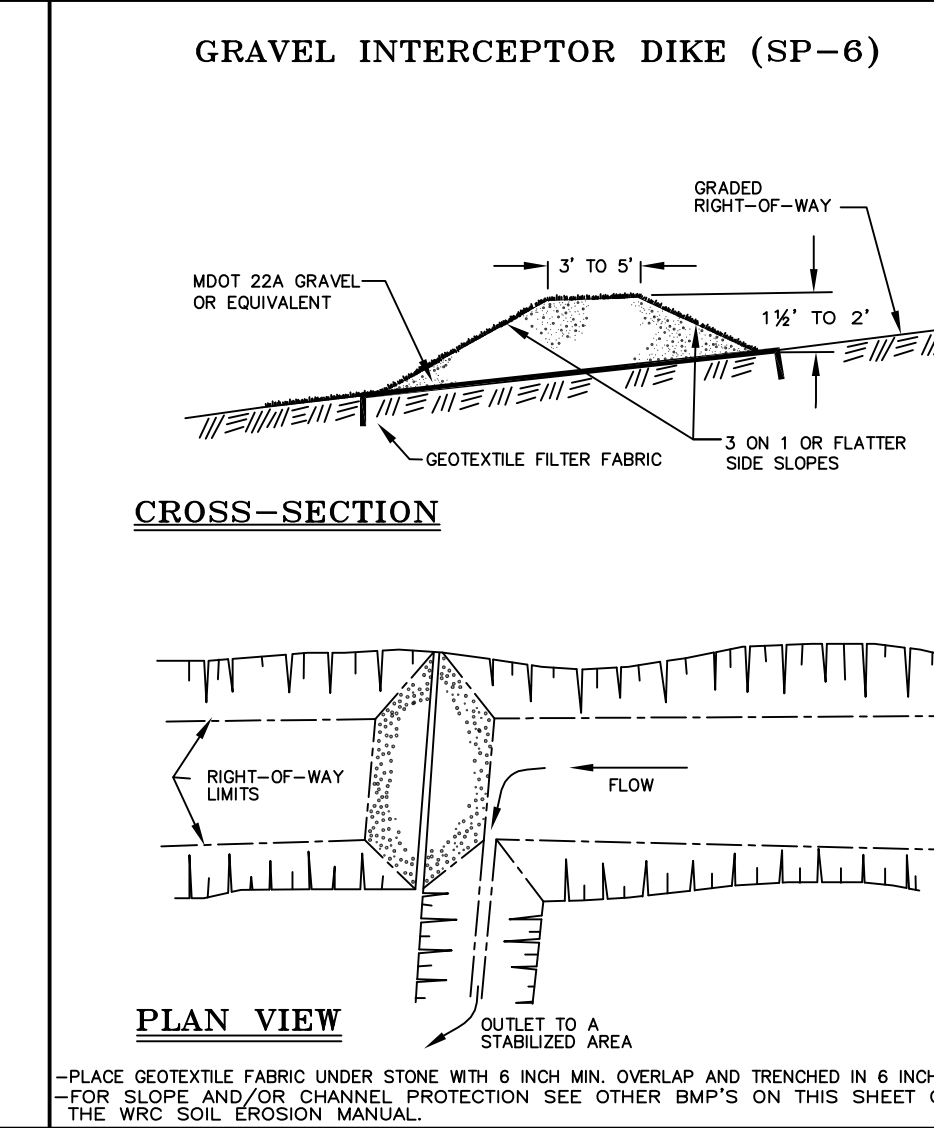
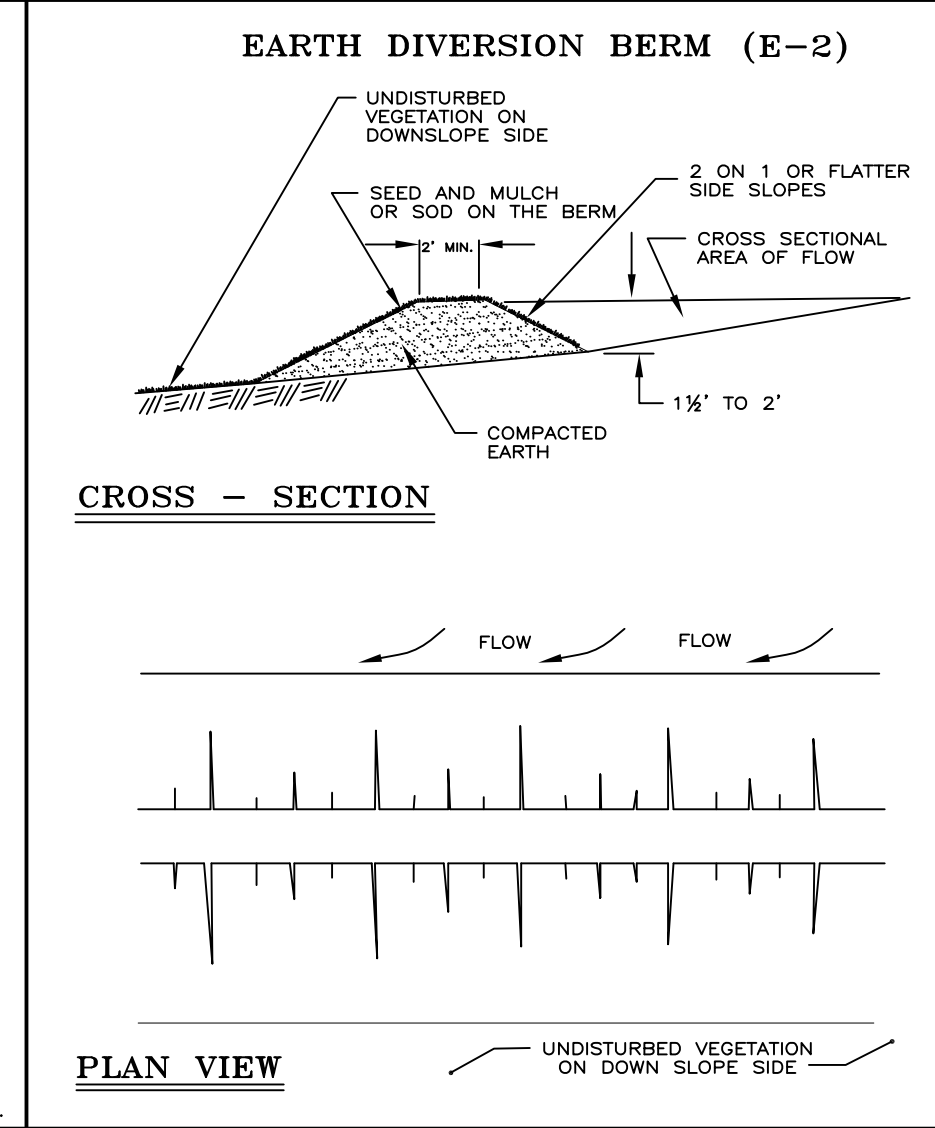
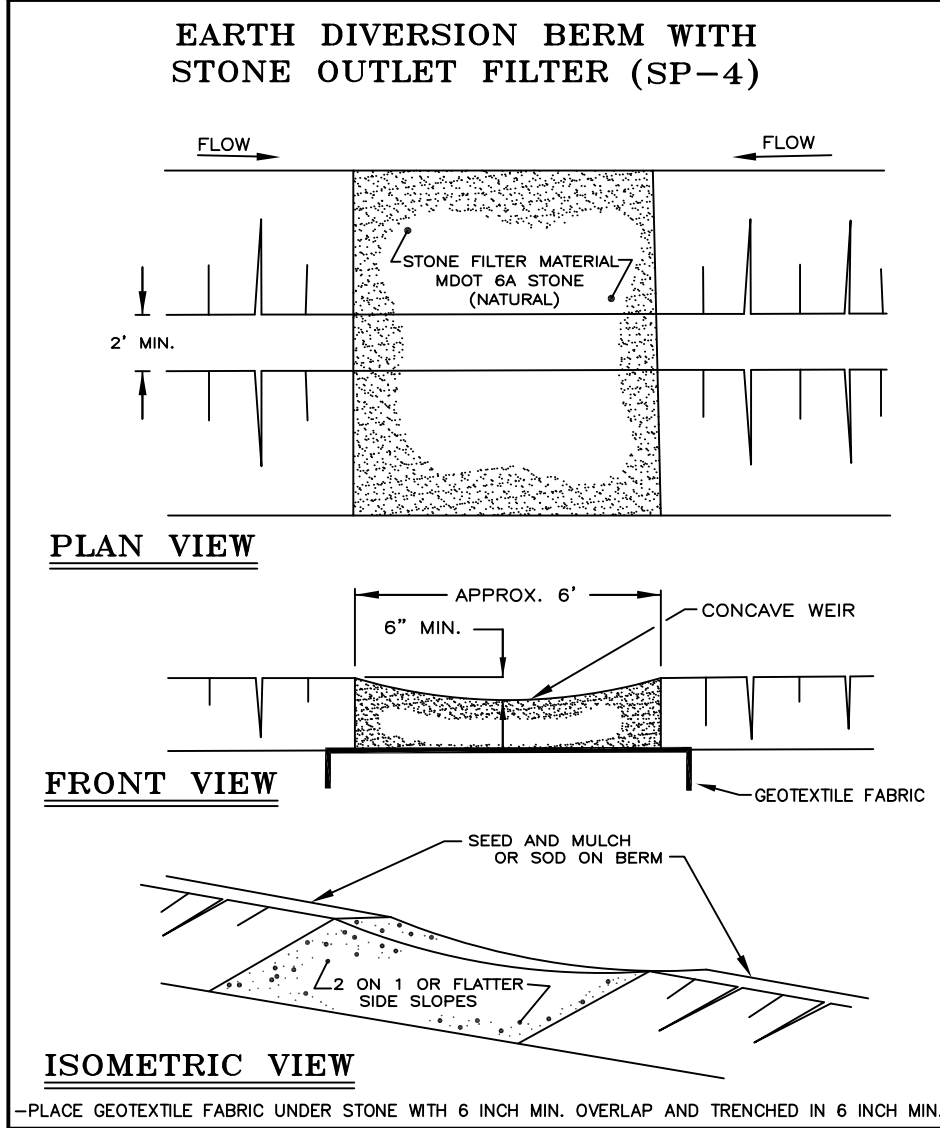
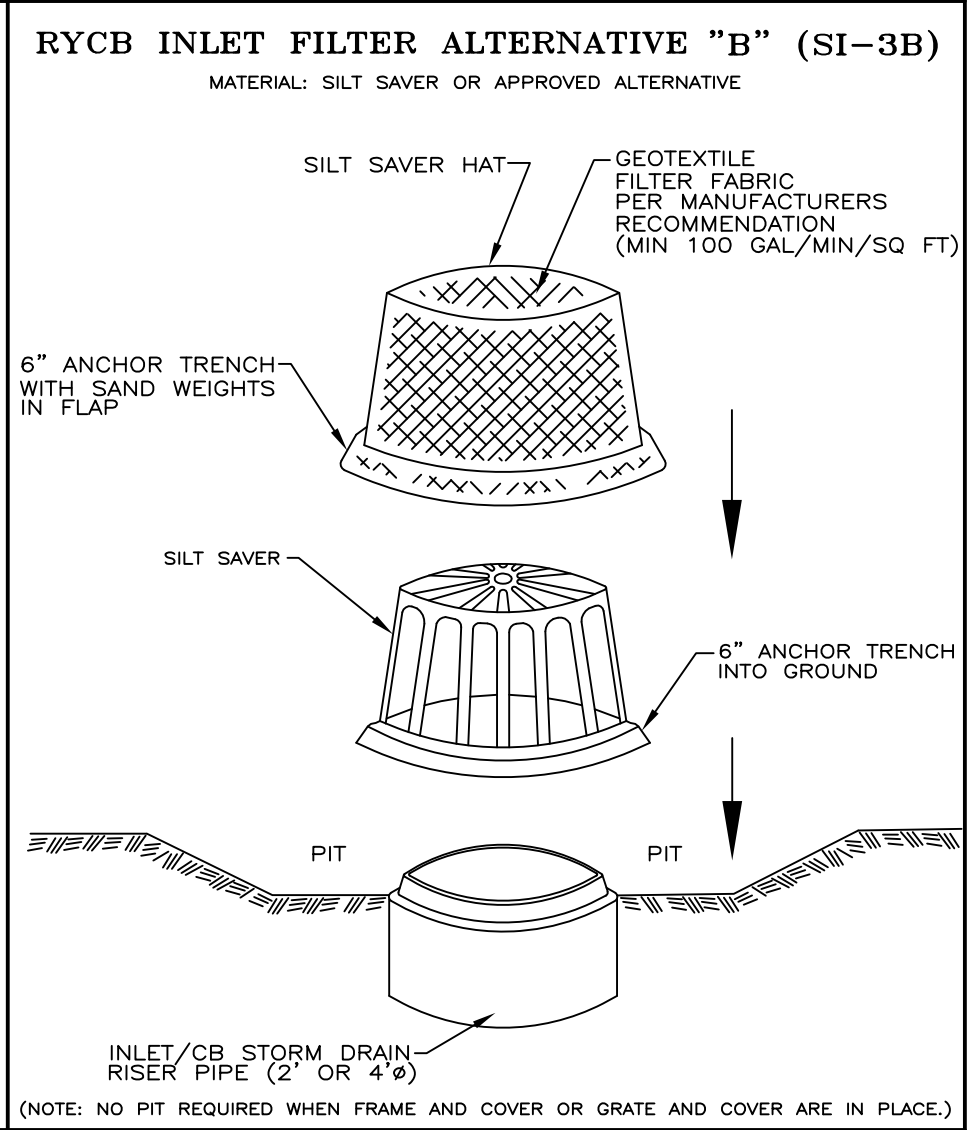
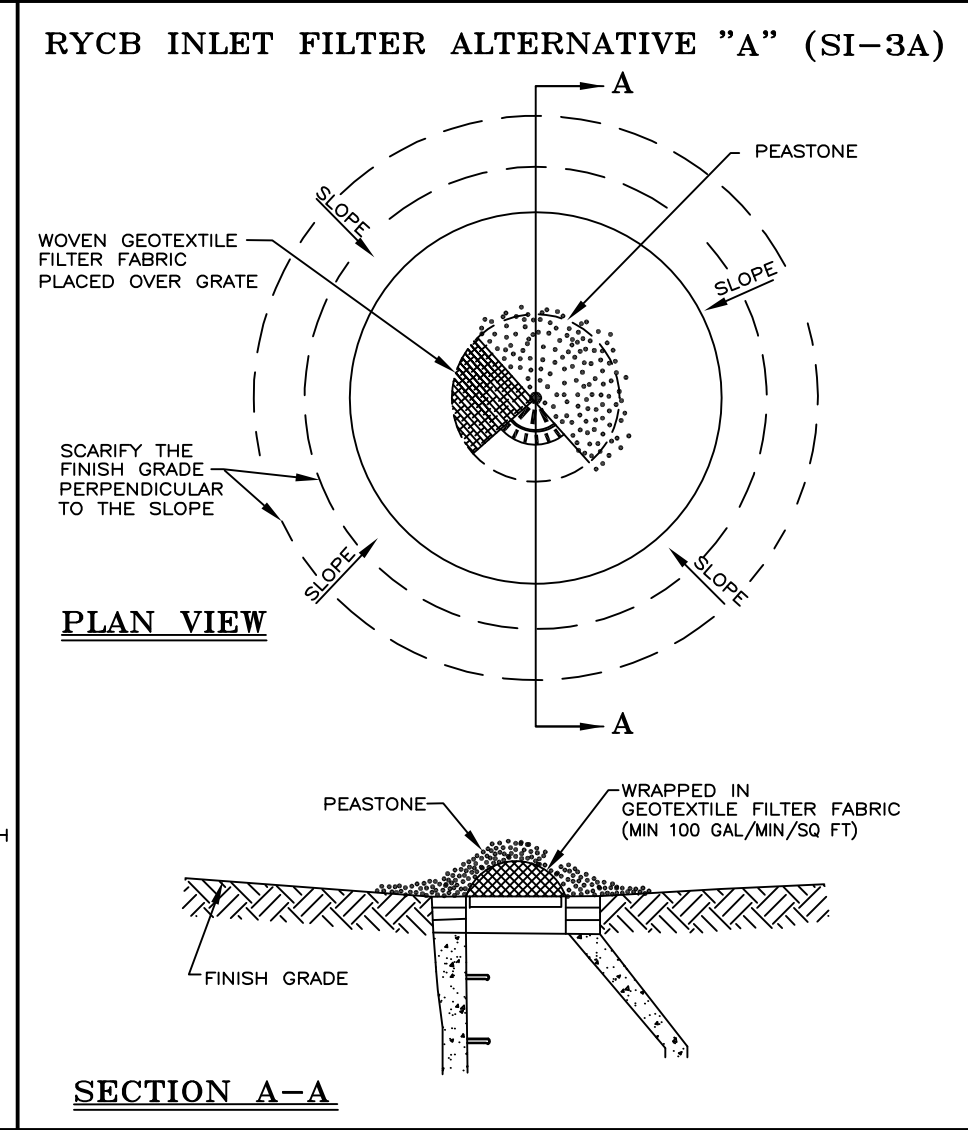
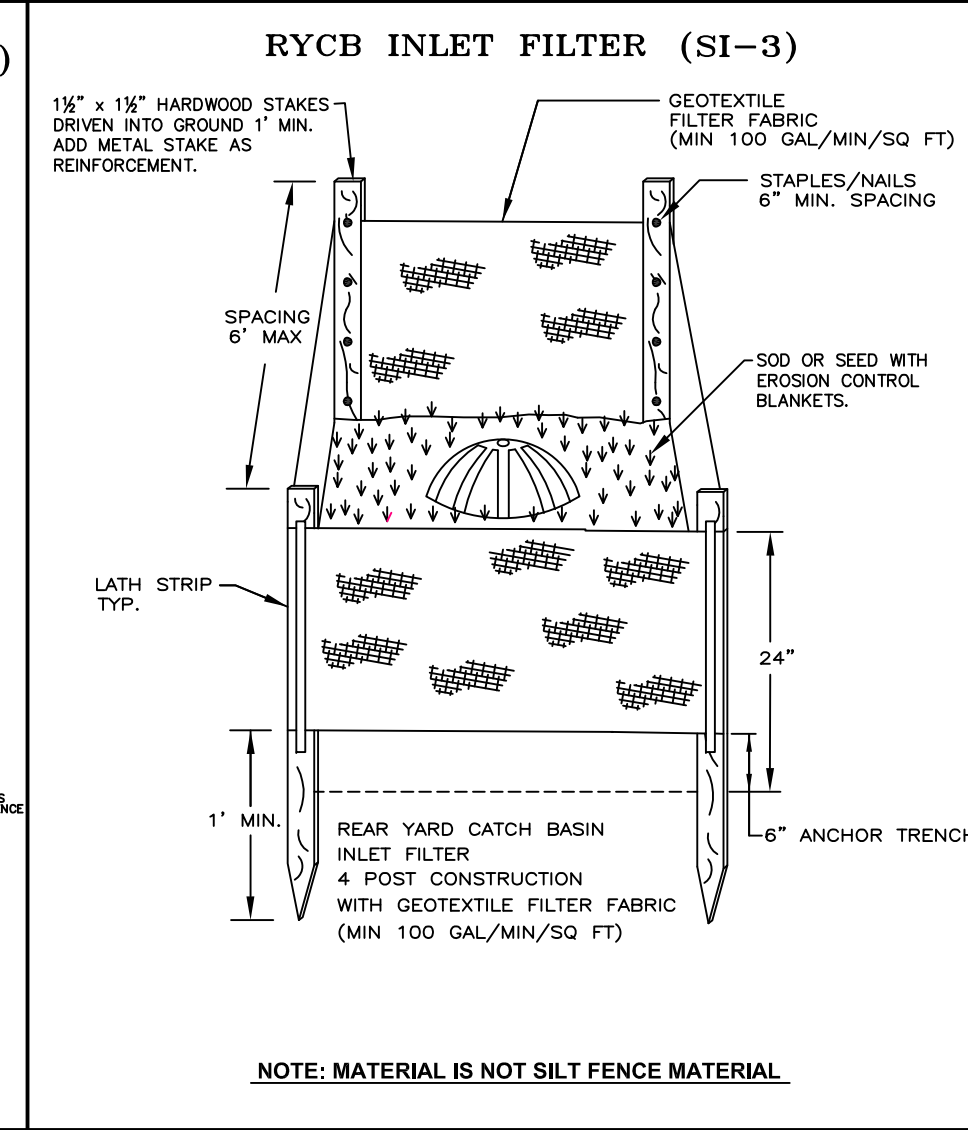
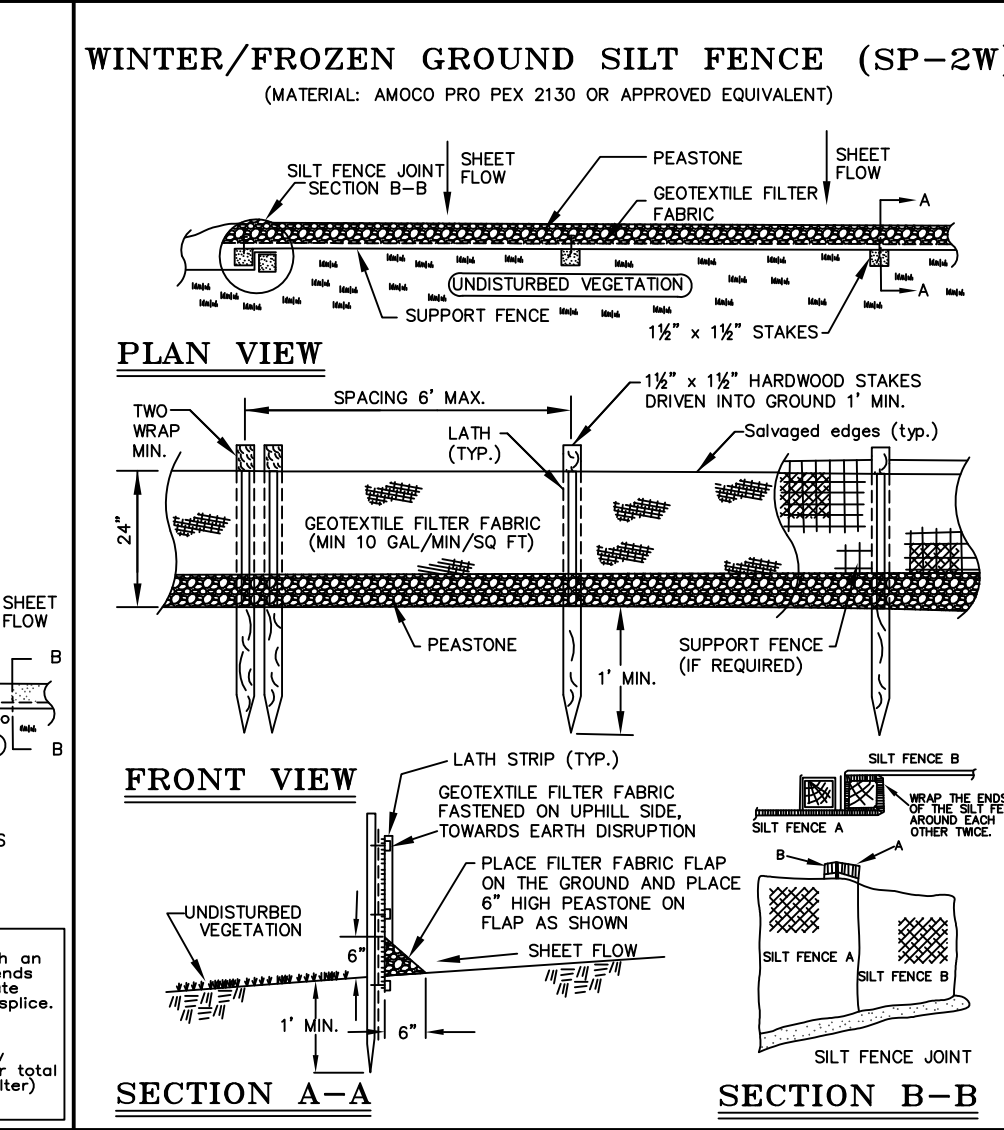
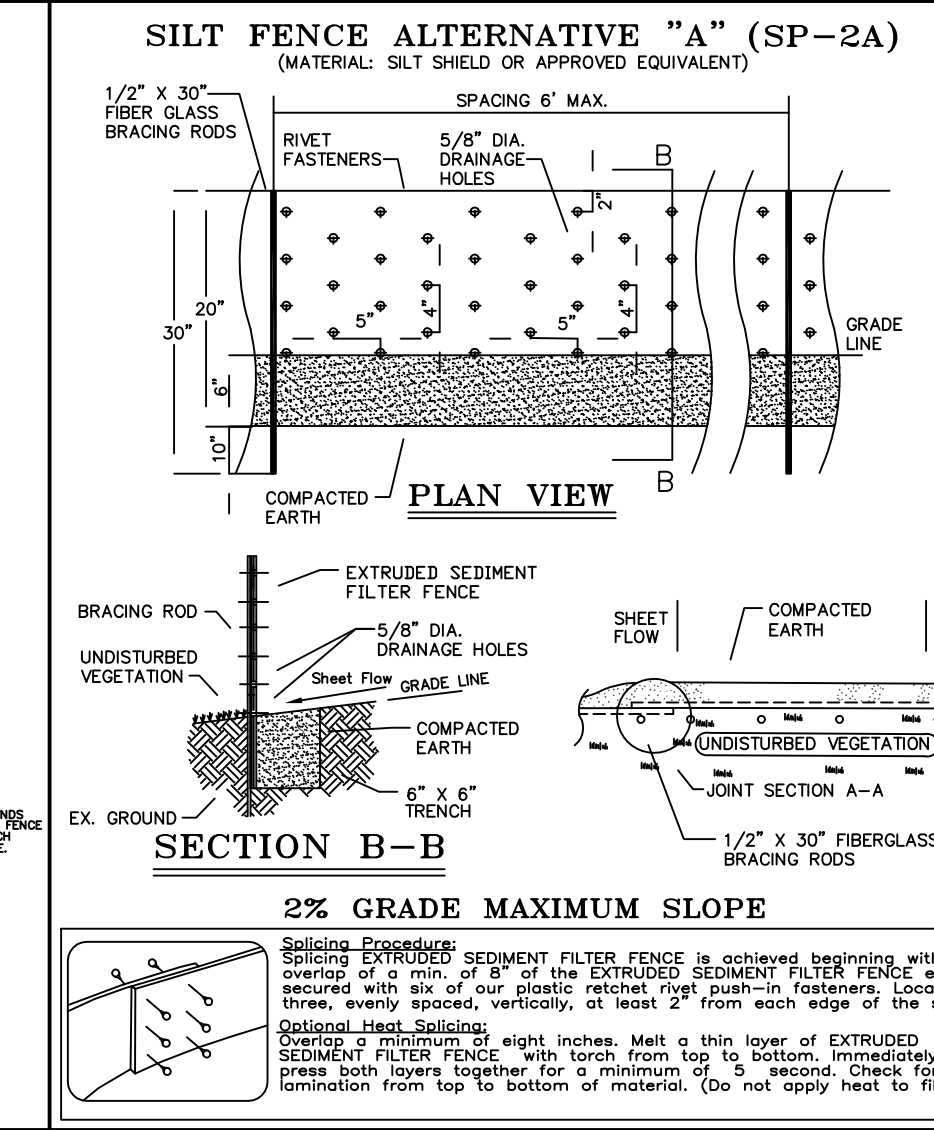
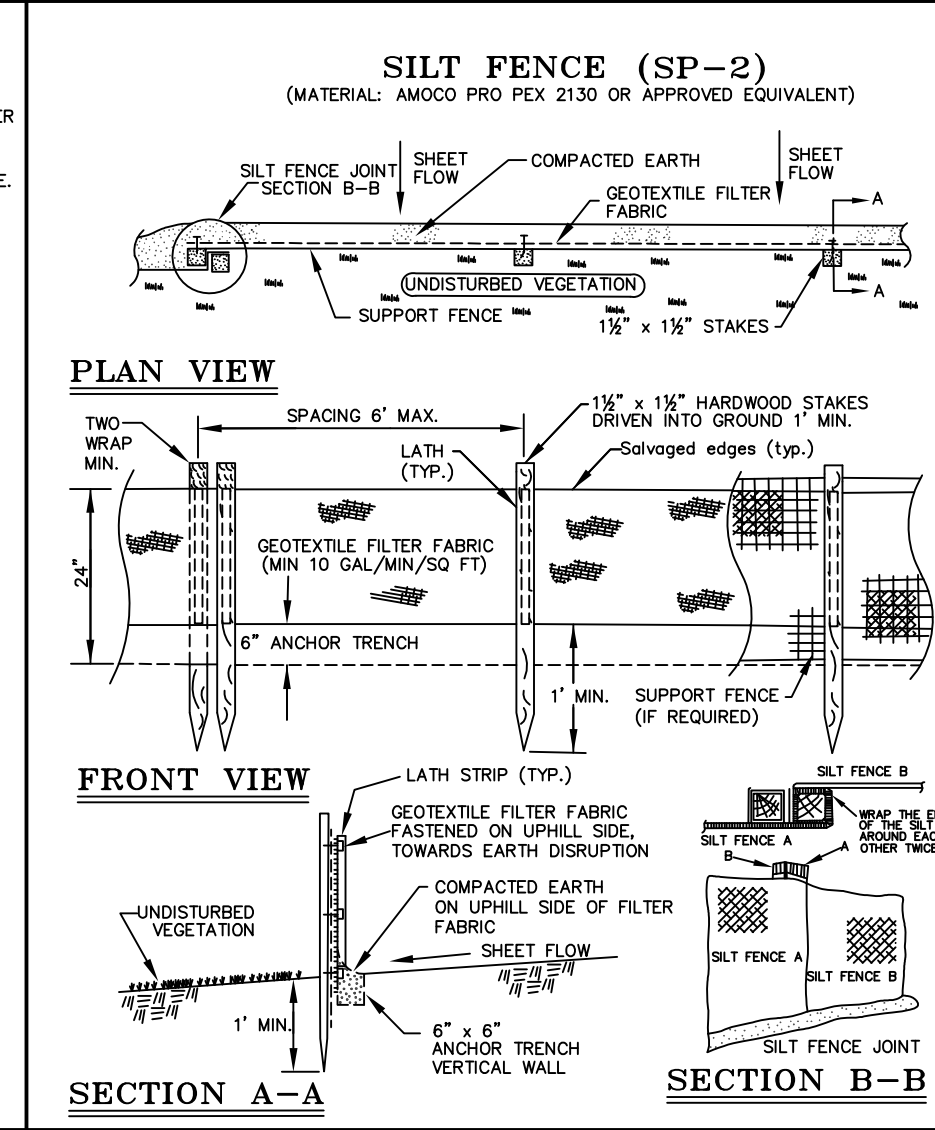
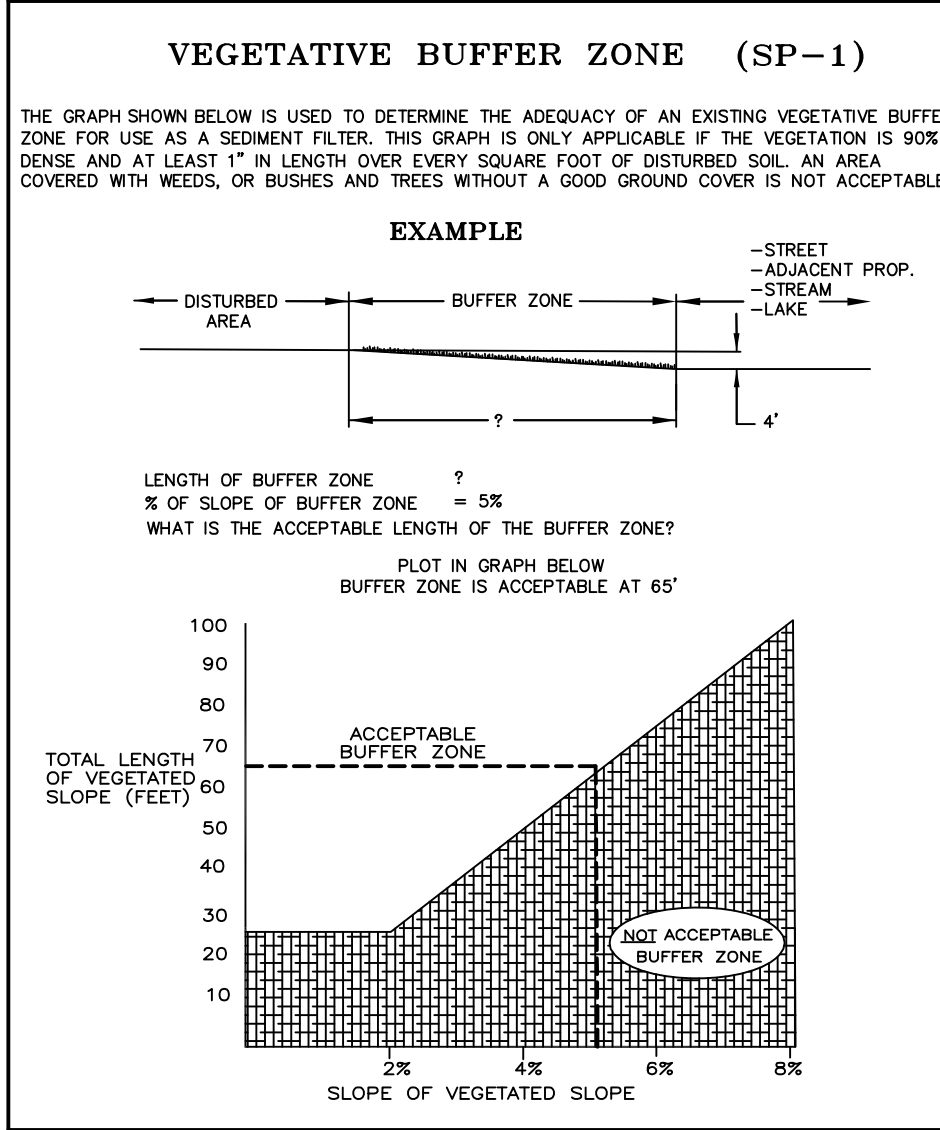
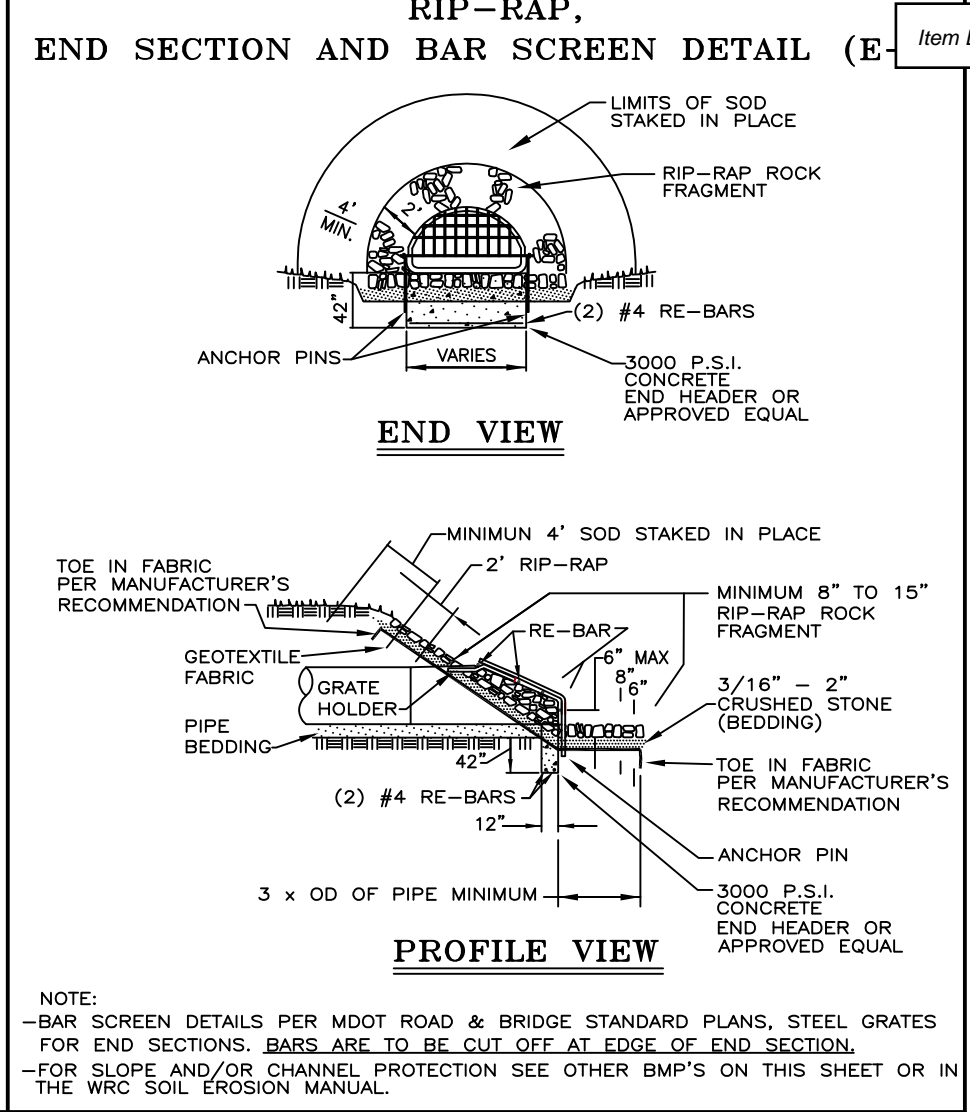
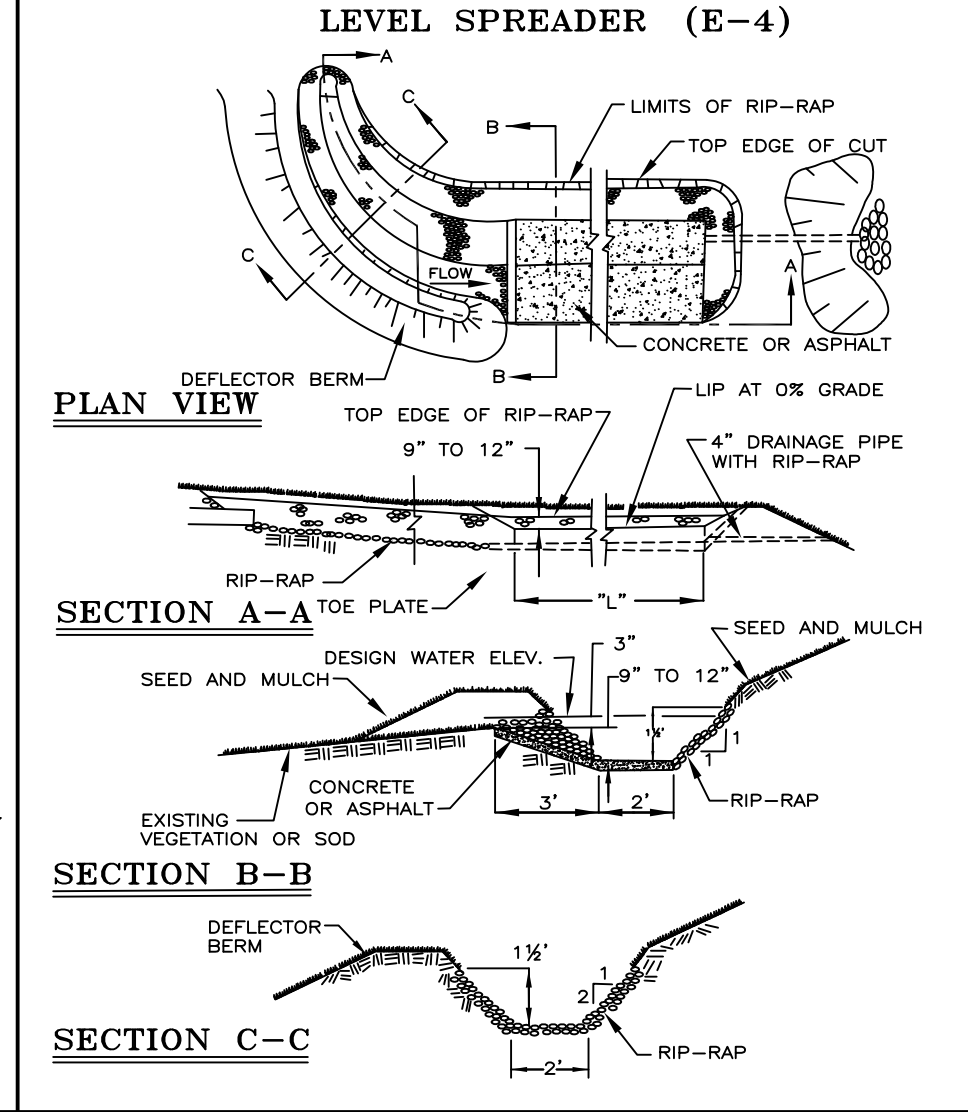
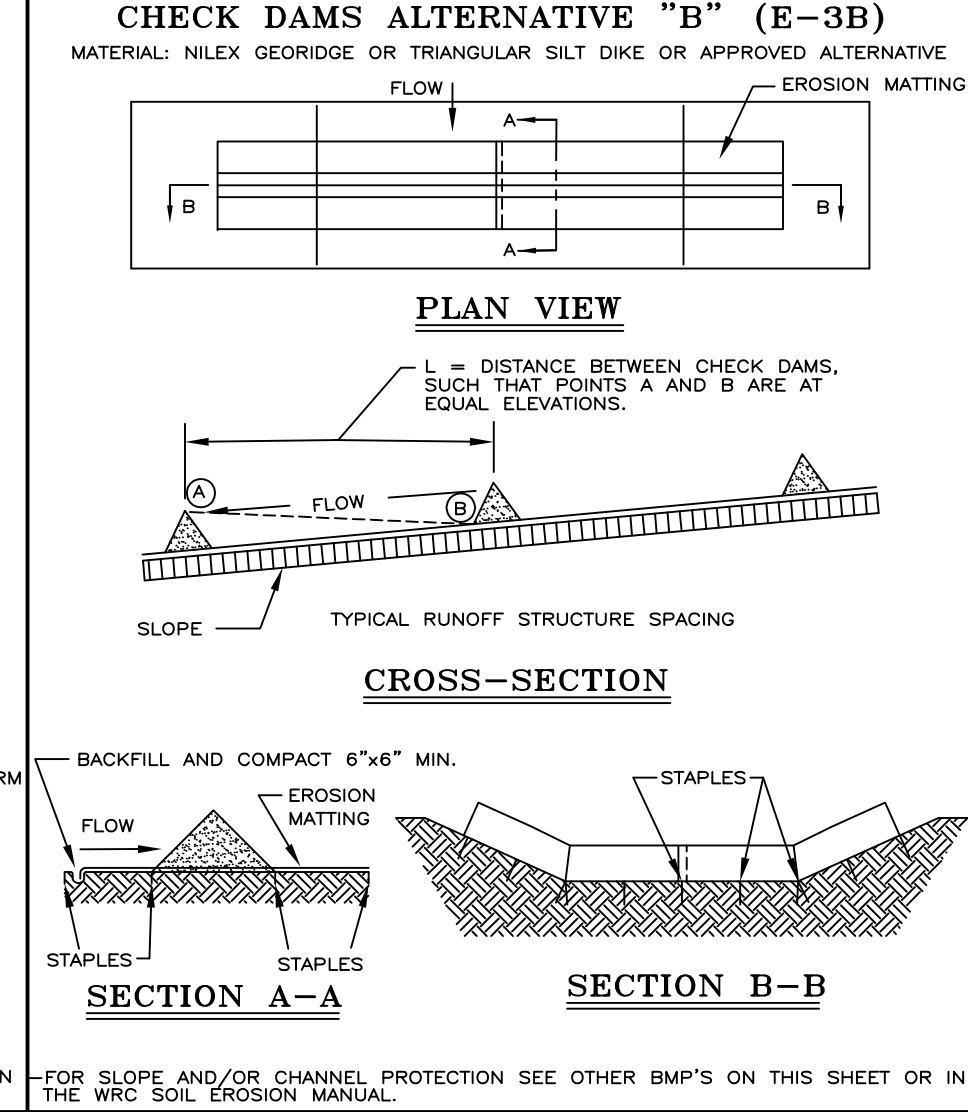
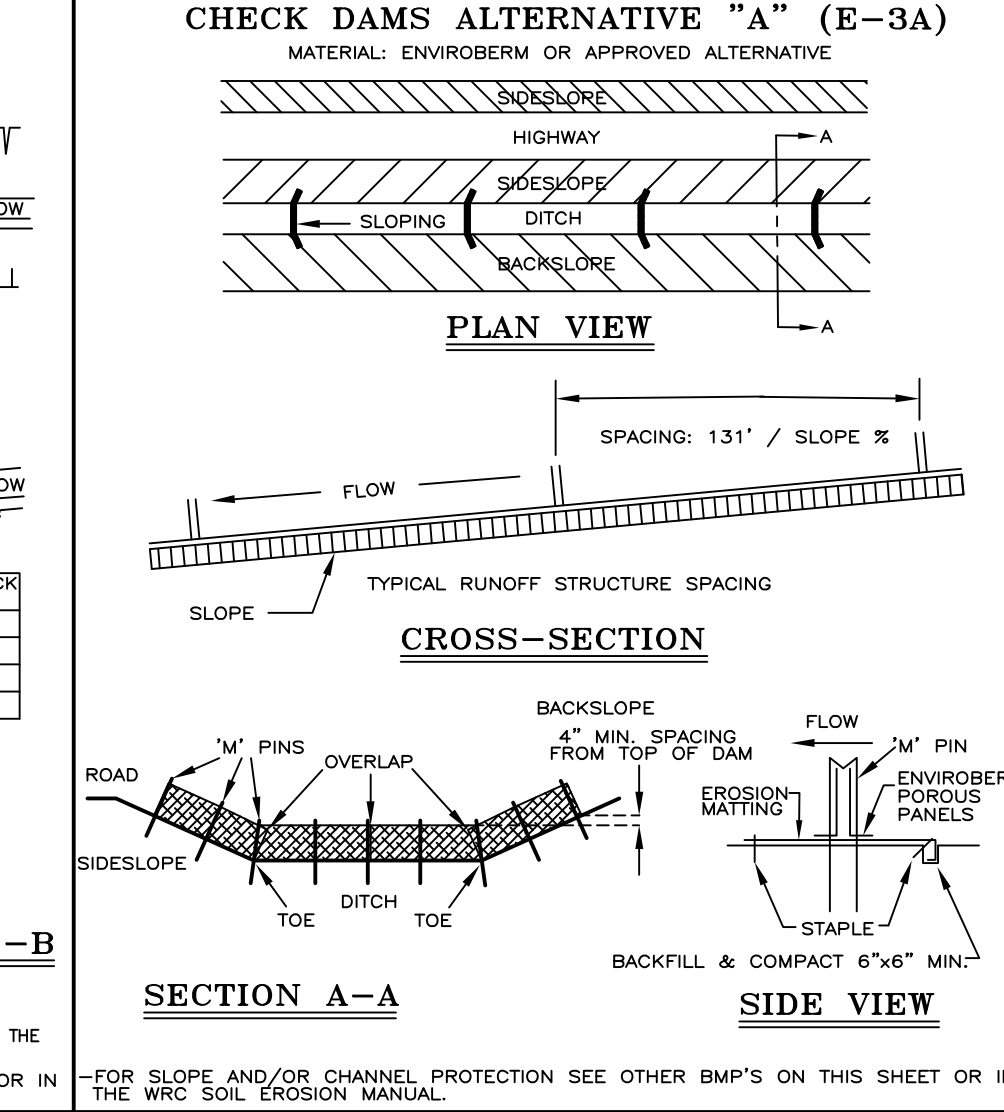
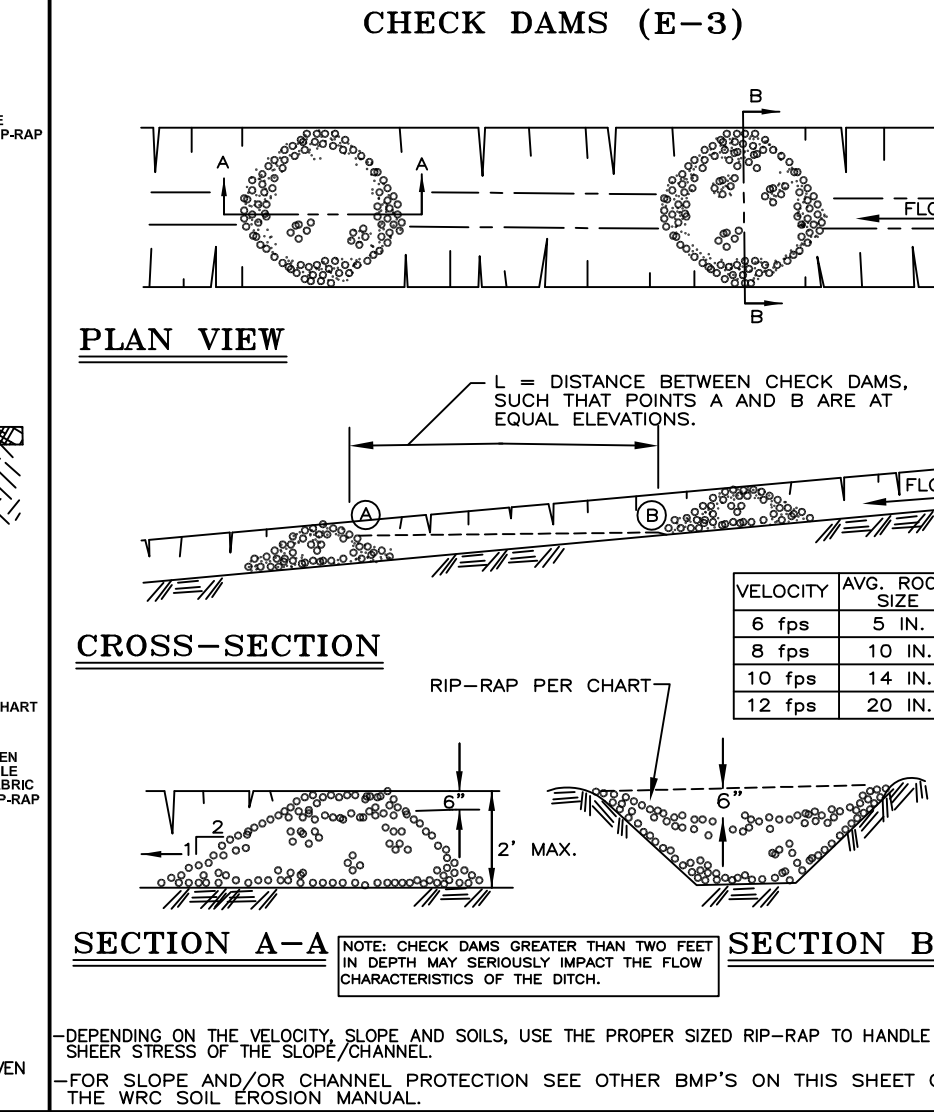
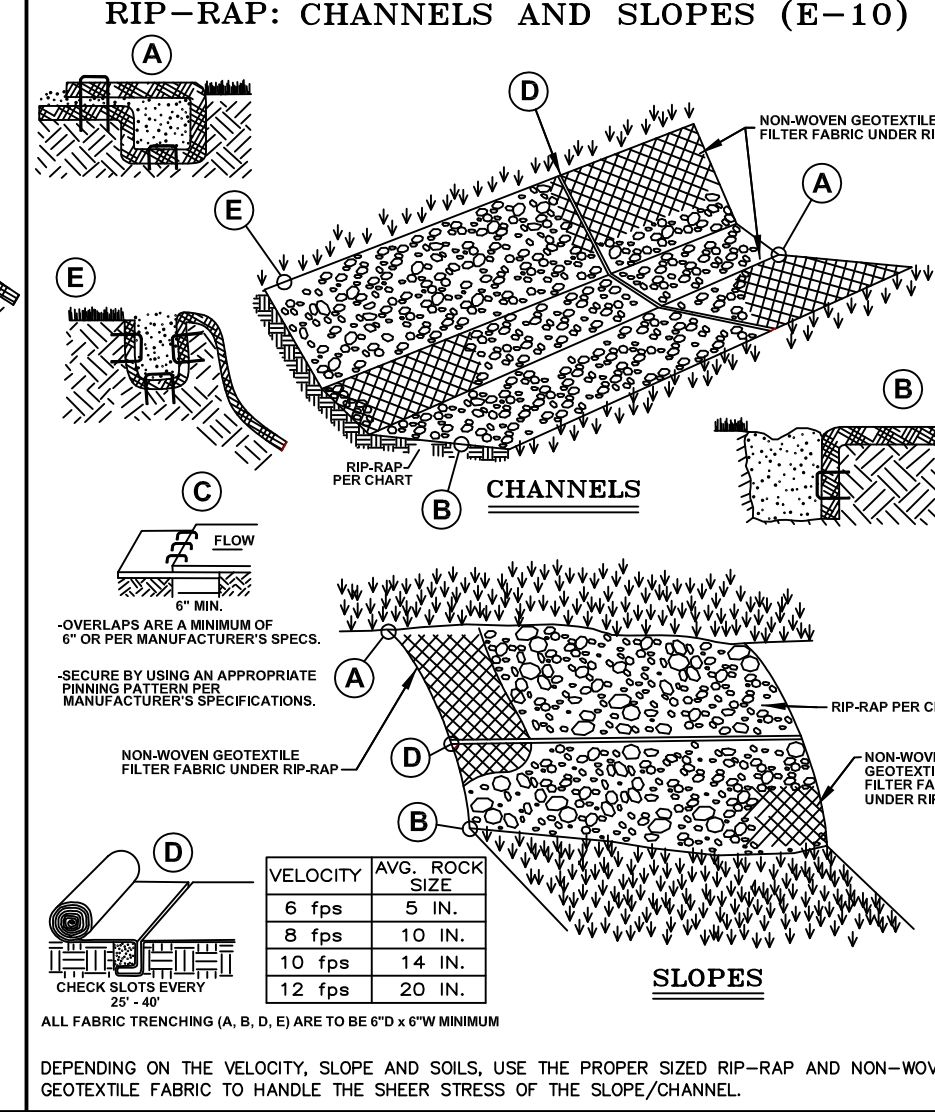
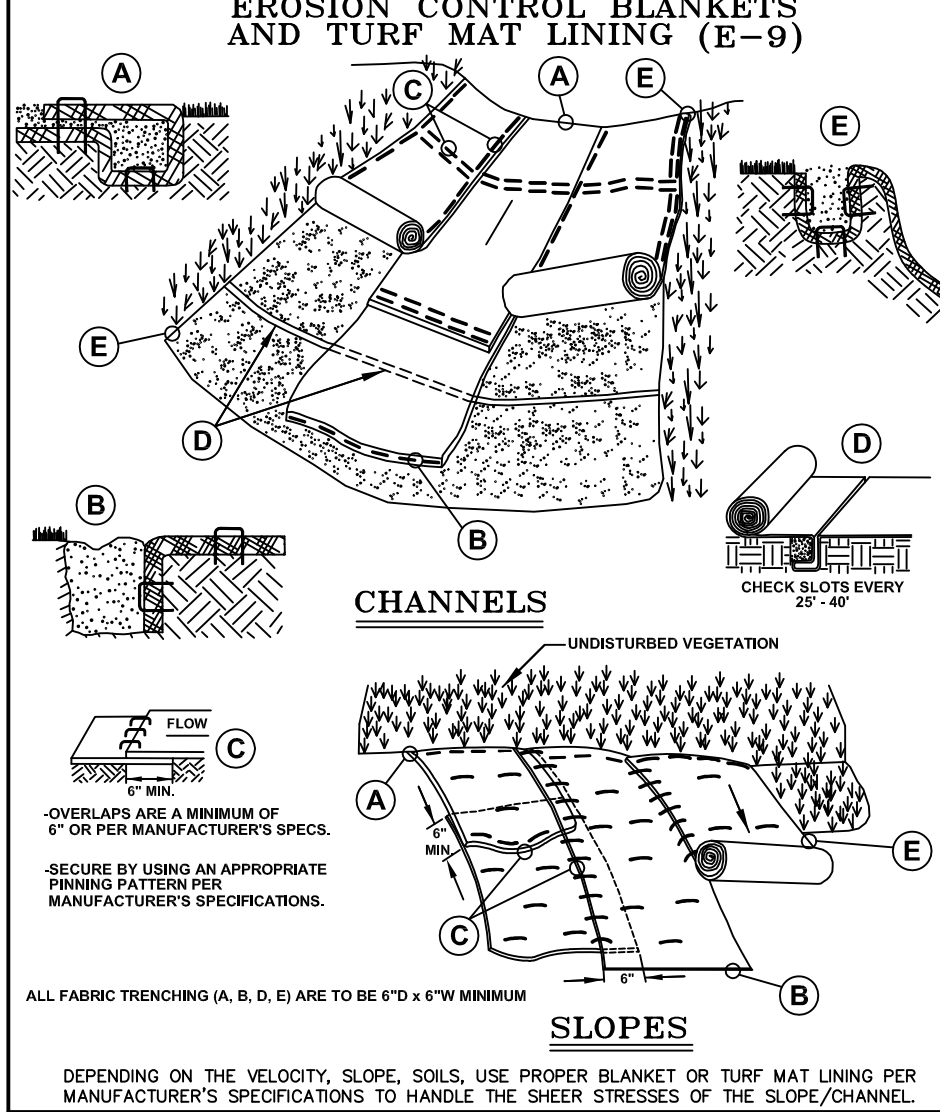
**Johnson & Anderson, Inc.**  
 CONSULTING ENGINEERS  
 4479 DIXIE HIGHWAY  
 WATERFORD, MICHIGAN 48329  
 (248) - 334-9901

**White Lake Charter Township**  
 7525 Highland Road, White Lake, Michigan 48383-2900  
 (248) 698-3300

**WATER MAIN STANDARD DETAILS**

SCALE: VERT. AS NOTED  
 HORIZ.

JOB NO.	
DATE ISSUED	
SHEET NO.	90



**NOTE:**

WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPs), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMPs SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

### SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

REVISION BLOCK

Rev.	By	Date	Description
1	JW	01/01/01	PROPOSED DETAIL REVISED
2	JW	01/01/01	FOR ENGINEER'S COMMITTEE APPROVAL, NAME CHANGES
3	JW	01/01/01	FOR ENGINEER'S COMMITTEE APPROVAL, DETAIL REVISIONS
4	JW	01/01/01	FOR ENGINEER'S COMMITTEE APPROVAL, DETAIL REVISIONS

ORIG. DATE: 01/01/01

SCALE: NONE

DESIGNED BY: WRC

DRAWN BY: Mapping

WRC WATER RESOURCES COMMISSIONER

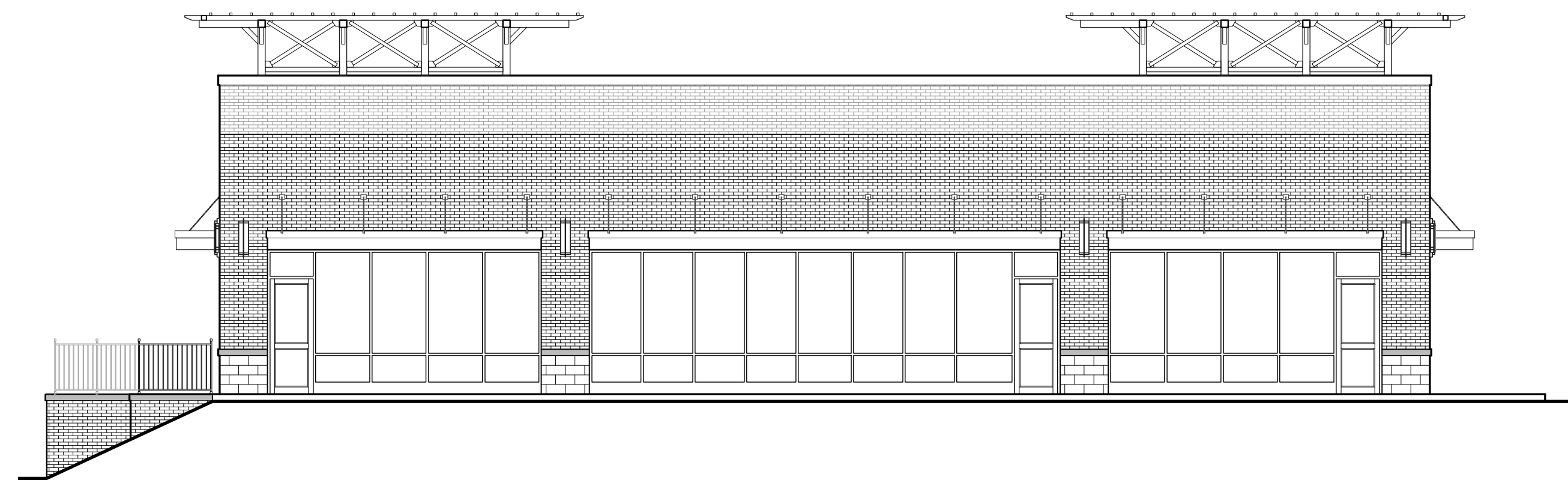
ONE PUBLIC WORKS DRIVE, BLDG 95 WEST WATERFORD, MICHIGAN 48326-1907

SHEET NO.: 1 of 1

# NEW RETAIL CENTER SHELL FOR: WHITE LAKE DEVELOPMENT

## COOLEY LAKE AND UNION LAKE ROADS WHITE LAKE, MICHIGAN

### PHASE 3 PERMITS



**CIVIL**



CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

**NOWAK & FRAUS ENGINEERS**

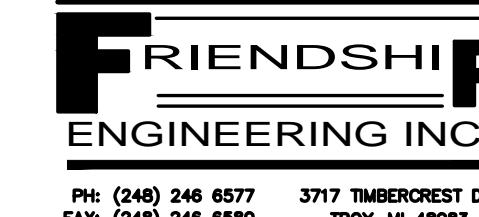
46777 Woodward Ave.  
Pontiac, MI 48342-5032  
Tel. (248) 332-7931  
Fax. (248) 332-8257

**ARCHITECTURAL**



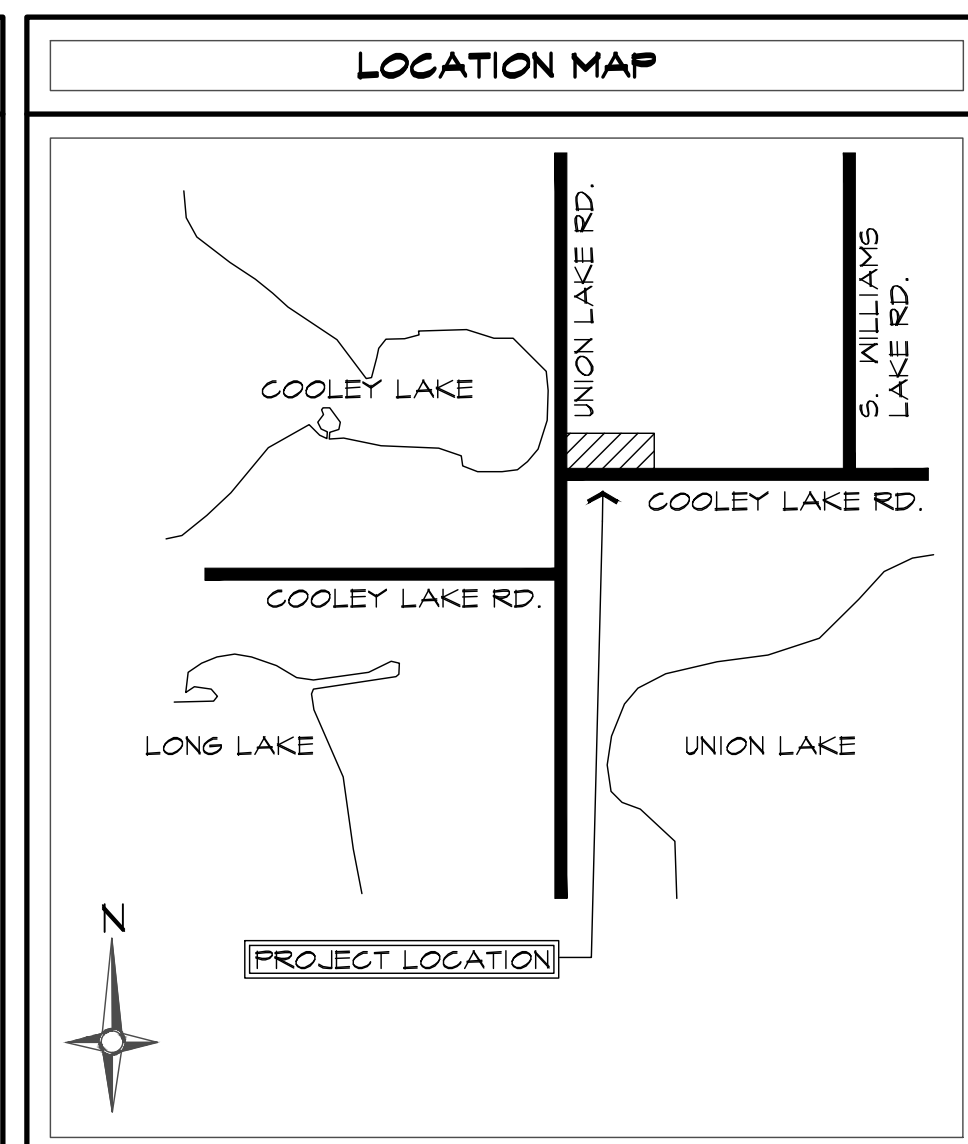
ARCHITECTURAL DESIGN  
RESIDENTIAL COMMERCIAL INDUSTRIAL  
**G.A.V. & ASSOCIATES, INC.**  
24001 ORCHARD LAKE RD., SUITE #180A  
FARMINGTON, MICHIGAN 48336  
PHONE (248) 985-9101

**STRUCTURAL**



CONSULTING ENGINEER  
STRUCTURE  
**FRIENDSHIP ENGINEERING**  
3717 TIMBERCREST DRIVE  
TROY, MICHIGAN, 48063  
PHONE (248) 246-6577  
FAX (248) 246-6580

PROJECT INFORMATION	
PROJECT NUMBER:	21096
PROJECT LOCATION:	COOLEY LAKE & UNION LAKE ROADS WHITE LAKE, MICHIGAN
DESIGN FIRM:	G.A.V. & ASSOCIATES, INC. 24001 ORCHARD LAKE RD FARMINGTON, MI 48336 PHONE: (248) 985-9101
1. THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:	SAMIR M. KARIM, M. LIC. #1801038452
2. THESE CONSTRUCTION DOCUMENTS WERE PREPARED FOR COMPLIANCE WITH THE MICHIGAN CONSTRUCTION CODES IN EFFECT AT THE TIME OF PERMIT SUBMITTAL. ALL ENGINEERS, CONTRACTORS AND SUPPLIERS INVOLVED WITH THIS PROJECT SHALL COMPLY WITH THE SAME CODES, ISSUED AND APPROVED CODE MODIFICATIONS AND/OR WHITE LAKE TOWNSHIP / STATE OF MICHIGAN CONSTRUCTION BOARDS OF APPEALS RULINGS AND WHENEVER REQUIRED SHALL PROVIDE SHOP DRAWINGS AND SUBMITTALS CLEARLY DESCRIBING COMPLIANCE TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW AND APPROVAL.	
3. ALL APPLICABLE GOVERNMENTAL AGENCIES, SUCH AS MDOT, OAKLAND COUNTY, UTILITY SERVICES, ETC. SHALL HAVE DRAWINGS SUBMITTED FOR REVIEW FOR ENGINEERING APPROVAL AT THE TIME OF PERMIT SUBMITTAL.	



SHEET INDEX	
<b>CIVIL</b>	NOT INCLUDED
<b>ARCHITECTURAL</b>	T.001 TITLE SHEET & PROJECT INFORMATION A.001 GENERAL INFORMATION AND SPECIFICATIONS A.101 FLOOR PLAN A.102 ROOF PLAN A.201 BUILDING ELEVATIONS A.202 BUILDING ELEVATIONS A.301 BUILDING SECTIONS A.401 MALL SECTIONS A.402 MALL SECTIONS A.501 DETAILS AND SCHEDULES A.502 DETAILS A.503 DETAILS A.601 REFLECTED CEILING PLAN
<b>STRUCTURAL</b>	S.101 FOUNDATION PLAN S.102 ROOF FRAMING PLAN S.103 ENLARGED FRAMING PLANS S.104 SECTIONS AND DETAILS

SHEET INDEX (CONTINUED)	
<b>MECHANICAL</b>	M.000 SYMBOLS AND ABBREVIATIONS M.101 FLOOR PLAN - MECHANICAL
<b>ELECTRICAL</b>	E.100 ELECTRICAL SYMBOLS & NOTES E.102 ELECTRICAL PLAN E.103 ELECTRICAL RISER DIAGRAM & SCHEDULES
<b>DEFERRED SUBMITTALS</b>	
<b>DEFERRED SUBMITTALS AND SPECIAL INSPECTIONS</b>	
1. CIVIL AND SITE DESIGN. 2. SIGNAGE. 3. INTERIOR BUILDOUTS FOR FUTURE RESTAURANT. 4. FINISHES.	

ABBREVIATIONS:			
AFF	ABOVE FINISH FLOOR	DN	DOWN
ALUM	ALUMINUM	DS	DOWN SPOUT
ANOD	ANODIZED	DWS	DRAWING
ACT	ACOUSTICAL TILE	EA	EACH
BC	BOTTOM CHORD	E.C.	ELEG. CONTRACTOR
BRD	BOARD	EF	EACH FACE
BFF	BELOW FINISH FLOOR	E.J.	EXPANSION JOINT
BLK	BLOCK	ELEC	ELECTRICAL
BM	BEAM	ELEV	ELEVATION
B.O.	BOTTOM OF	EXH	EXHAUST
BOF	BOTTOM OF FOOTING	EX/EXIST	EXISTING
BU	BUILT UP	EXT	EXTERIOR
CAB	CABINET	EW	EACH WAY
C.B.	CATCH BASINS	F#1	FURNISH AND INSTALL
C	COLD	FD	FLOOR DRAIN
CER	CERAMIC	FFE	FINISH FLOOR
C.J.	CONTROL JOINT	FND.	FOUNDATION
C.L.	CENTER LINE	FO	FINISHED OPENING
CLS	CELLING	FOP	FACE OF FINISH
CLOS	CLOSET	FOS	FACE OF GYPSUM
C.O.	CLEAN OUT	FOM	FACE OF MASONRY
CM	CONSTRUCTION MANAGER	FTG	FOOTING
COL	COLUMN	FS	FLOOR SINK
CONC	CONCRETE	GALV	GALVANIZED
CONT	CONTINUOUS	GC	GENERAL CONTRACTOR
DEFS	DIRECT APPLIED FINISH SYSTEM	GL	GLASS
DET	DETAIL	GB	GRAB BAR
DIM	DIMENSION	GYP	GYPSUM
DIA	DIAMETER	HM	HOLLOWED METAL
DL	DEAD LOAD	HVAC	HEATING & VENT.
INSUL.	INSULATION	IST	JOIST
T & B	TOP AND BOTTOM	JT	JOINT
TBL	TOP OF BRICK LEDGE	LD	LIVE LOAD
T.O.S.	TOP OF TOP OF STEEL	LP	LIGHT POLE
T.O.P.	TOP OF PIER	MAS	MASONRY
T.O.W.	TOP OF WALL	MAX	MAXIMUM
TYP	TYPICAL	MCM	METAL COMPOSITE MATERIAL
UN.O.	UNLESS NOTED OTHERWISE	MECH.	MECHANICAL
VIF	VERIFY IN FIELD	MIN	MINIMUM
W	WITH	MTL.	METAL
W/	WOOD	O.D.	ON CENTER
WNF	MELDED WIRE FABRIC	OPH	OPPOSITE HAND
		NTS	NOT TO SCALE
		PL	PLATE
		PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
		PT	PAINT
		RA	RETURN AIR
		RD	ROOF DRAIN
		REIN	REINFORCEMENT
		REQ	REQUIRED
		RO	ROUGH OPENING
		SA	SUPPLY AIR
		SIM	SIMILAR
		STL	STEEL
		STOR	STORAGE
		TE	TOWEL BAR
TC	TOP CHORD	AASHO	AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS
T & B	TOP AND BOTTOM	A.I.A.	AMERICAN INSTITUTE FOR ARCHITECTS
TBL	TOP OF BRICK LEDGE	ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
T.O.S.	TOP OF TOP OF STEEL	AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
T.O.P.	TOP OF PIER	CRSI	CONCRETE REINFORCING SOCIETY INSTITUTE.
T.O.W.	TOP OF WALL	MEC	MICHIGAN BUILDING CODE
TYP	TYPICAL	MHC	MICHIGAN MECHANICAL CODE
UN.O.	UNLESS NOTED OTHERWISE	MPC	MICHIGAN PLUMBING CODE
VIF	VERIFY IN FIELD	MEC	MICHIGAN ELECTRICAL CODE
W	WITH	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
W/	WOOD	UL	UNDERWRITERS LABORATORIES
WNF	MELDED WIRE FABRIC		

ISSUED FOR	
PERMITS	10.22.2021
<b>SEAL</b>	

**PROJECT DATA:**

USE GROUP	M - MERCANTILE
CONSTRUCTION TYPE	IIB NOT SPRINKLED

**SITE REQUIREMENTS:**

MAXIMUM BUILDING HEIGHT	25'-0"
PROPOSED BUILDING HEIGHT	22'-11"

<b>BUILDING DATA</b>	<b>GROSS FLOOR AREA</b>
BUILDING	3,843 GSF

**CODE REVIEW & BUILDING ANALYSIS:**

- THESE BUILDING PLANS ARE BEING SUBMITTED FOR THE PROPOSED ONE STORY RETAIL SHELL BUILDING ONLY. INTERIOR BUILD OUT SHALL BE SUBMITTED IN FUTURE SUBMITTALS. COORDINATE WITH OWNER ANY FUTURE BUILD OUT (S) BASED ON USE GROUPS AND AS PERMITTED PER CURRENT APPLICABLE LOCAL AND STATE CODES. THIS INCLUDES, BUT NOT LIMITED TO, THE CONSTRUCTION OF THE TENANT DEMISING WALLS.
- GENERAL CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE, CITY AND LOCAL CODES WHERE APPLICABLE. ALL NEW CONSTRUCTION SHALL COMPLY TO THE FOLLOWING:
  - 2015 MICHIGAN BUILDING CODE (MBC).
  - 2015 MICHIGAN MECHANICAL CODE (MMC).
  - 2015 MICHIGAN PLUMBING CODE (MPC).
  - 2014 MICHIGAN ELECTRICAL CODE P78 (NEC).
  - 2017 NATIONAL ELECTRICAL CODE (NEC).
  - 2009 ICC/ANSI A117.1 AND MICHIGAN BARRIER FREE DESIGN LAW P.A. 1 OF 1966 AS AMENDED.
  - 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) WITH 2013 ASHRAE STANDARD 90.1 STANDARD INCLUDING AMENDMENTS.
  - 2015 MICHIGAN UNIFORM ENERGY CODE, PART 10a (MEC)
  - 2010 FIRE SUPPRESSION NFPA 13
  - 2013 FIRE ALARM CODE NFPA 72
  - 2012 INTERNATIONAL FIRE CODE (IFC)
  - 2015 INTERNATIONAL FUEL GAS CODE (IFGC)
  - PROJECT SHALL COMPLY WITH MBC 2015 CHAPTER 35 REFERENCE STANDARDS.
  - WHITE LAKE TOWNSHIP ZONING ORDINANCE AND CODES

**SITE WORK:**

REFER TO CIVIL DRAWINGS FOR ALL SITE INFORMATION. CIVIL DRAWINGS SHALL OVERRIDE THE SITE NOTES IN THIS SECTION.

**GENERAL SITE NOTES:**

- OWNER AGREES TO SEASONAL MAINTENANCE PROGRAM AND WILL REPLACE ALL DISEASED, DEAD OR DAMAGED PLANTS, REPLENISH MULCH, CONTROL WEEDS, FERTILIZE AND PRUNE, BEGINNING UPON COMPLETION OF CONSTRUCTION OF LANDSCAPING.
- ANY HAZARDOUS MATERIALS PRODUCED, STORED OR OTHERWISE ON PREMISE WILL BE HANDLED PER APPLICABLE RULES AND REGULATIONS.
- OWNER AGREES TO PICK-UP DEBRIS WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED.
- PAVED SURFACES, WALK WAYS, SIGNS, LIGHTING AND OTHER STRUCTURES AND SURFACES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED. PARKING LOT STRIPING AND MARKINGS SHALL BE MAINTAINED IN A CLEARLY VISIBLE MANNER.
- THERE WILL BE NO OUTDOOR STORAGE.
- THERE ARE NO EXISTING WETLANDS ON-SITE.
- ALL LIGHTING ON THE SITE SHALL BE SHIELDED AND NOT ENCRDACH UPON ADJUTING PROPERTIES OR RIGHT-OF-WAYS. THE LIGHT POLES SHALL BE NO HIGHER THAN 20 FEET. ALL GLARES SHALL BE ELIMINATED FROM ALL LIGHT FIXTURES. UPWARD DIRECTED LIGHTING SHALL NOT BE PERMITTED.
- ALL LANDSCAPED AREAS SHALL BE AUTOMATICALLY IRRIGATED.
- FIRE ACCESS TO BE MAINTAINED DURING CONSTRUCTION.
- ON-SITE HYDRANT LOCATIONS SHALL BE APPROVED BY THE FIRE MARSHALL PRIOR TO ENGINEERING APPROVAL. ON-SITE HYDRANTS MAY BE REQUIRED.
- PROPOSED BUILDING TO COMPLY WITH MBC 2015 SECTION 304.
- ALL BARBED WIRE AND SUPPORTS FOR BARBED WIRE ARE PROHIBITED ON THE SITE.
- ALL OUTDOOR RETAIL SALES OF ITEMS SHALL BE PROHIBITED ON THE SITE.

**GENERAL CONDITIONS:**

- THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERALLY THE LOCATIONS OF MATERIALS AND EQUIPMENT. THESE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. CONTRACTOR IS RESPONSIBLE FOR REVISIONS, COORDINATING AND APPROVING ALL WORK TO BE DONE BY CONTRACTORS. ANY SUBMITTAL TO ARCHITECT / ENGINEER SHALL BE REVIEWED BY THE C.M. BEFORE SUBMITTING TO ARCHITECT / ENGINEER.
- BUILDING SHALL HAVE A NEW FIRE ALARM SYSTEM PER ELECTRICAL DRAWINGS AND THE SYSTEM SHALL COMPLY WITH 2015 MBC AND ALL APPLICABLE CODES.
- ALL EXTERIOR WOOD, PLYWOOD, ETC. SHALL BE PRESERVATIVE TREATED.
- CONSTRUCTION MANAGER AND THE CONTRACTORS SHALL COMPLY WITH ALL CODES CURRENTLY IN EFFECT IN THE CITY OF AUBURN HILLS AND THE STATE OF MICHIGAN.
- CONFORM TO A.I.A. DOCUMENT NO. A-201, LATEST EDITION, AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, LAWS, RULES AND REGULATIONS.
- ALL CONTRACTORS SHALL CARRY ADEQUATE INSURANCE OR OTHERWISE SECURE, PROTECT AND HOLD HARMLESS THE OWNER AND ITS AGENTS AND THE ARCHITECT/ENGINEER FROM ANY LIABILITY OR DAMAGE WHATSOEVER, FOR INJURY (INCLUDING DEATH) TO ANY PERSON OR PROPERTY.
- SUSPENDED ACOUSTICAL CEILING TILES AND GRID SYSTEM SHALL COMPLY NFPA 101 2012 AND MBC 2015.
- GRID WORK SHALL BE SUPPORTED WITH A MINIMUM OF 2-12 GA. HANSER WIRES TO STRUCTURE ABOVE.
- PROVIDE A KNOX BOX FOR FIRE DEPARTMENT ACCESS. LOCATE ON BUILDING, AS PER FIRE MARSHALL.
- INSTALL 6" HIGH ADDRESS NUMBERS WHICH ARE VISIBLE FROM THE STREET. VERIFY LOCATION WITH FIRE MARSHALL.
- ALL WALLS SHALL EXTEND UP TO AND BE SEALED TO THE UNDERSIDE OF FLOOR / ROOF DECK.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SIGNAGE PER SECTION 1109 OF THE 2015 MBC AND SECTION 703 OF THE ANSI A117.1.
- ALL PROTRUDING OBJECTS ON CIRCULATION PATHS SHALL COMPLY WITH SECTION 307 OF THE ANSI A117.1-2004
- ANY RATED WALL THAT HAS PROTECTED OPENINGS OR PENETRATIONS SHALL BE PERMANENTLY IDENTIFIED ABOVE CEILING WITH SIGNS OR STENCILING 8" NOT LESS THAN 30'-0" O.C. ALONG THE HORIZONTAL DIMENSION. LETTERS SHALL NOT BE LESS THAN 0.5" IN HT. AND CONTAIN THE WORDS 'FIRE & SMOKE BARRIER-PROTECT ALL OPENINGS' ALL PENETRATIONS IN WALLS FOR PIPING.
- ALL PENETRATIONS IN RATED WALLS SHALL BE SEALED W/ APPLICABLE FIRE RATED SEALANT, STOP, OR OTHER APPROVED METHOD PER I.F.C. 2012. ANY PENETRATIONS SHALL BE SEALED WITH FIRE RATING EQUIVALENT TO PENETRATED SYSTEM.

**GENERAL CONDITIONS (CONTINUED):**

- A PORTABLE FIRE EXTINGUISHER MUST BE PRESENT DURING CONSTRUCTION. PERMANENT PORTABLE FIRE EXTINGUISHER LOCATIONS TO BE DETERMINED PER I.F.C. AND FIELD BUILDING INSPECTOR.
- FIRESTOPPING SHALL BE TESTED IN ACCORDANCE WITH ASTM E-814 TEST STANDARDS. CONTRACTOR TO SUBMIT TEST REPORT ATTACHED WITH THE SUBMITTAL COVER SHEET FOR EACH APPLICATION, I.E. FOR EACH KIND OF CONSTRUCTION (RATED FLOOR/CILING RATED WALLS, ETC.) BEFORE INSTALLATION. FIRESTOPPING INSTALLATION SHALL NOT BE CONCEALED WITH FINAL CONSTRUCTION UNTIL APPROVED BY BUILDING INSPECTOR.
- ALL HAZARDOUS ROOMS TO HAVE DOOR CLOSURE AND SHALL BE SMOKE TIGHT ENCLOSURES IN JANITOR CLOSETS, MECHANICAL / ELECTRICAL ROOMS AND STORAGE ROOMS.
- DO NOT SCALE DRAWINGS, USE GIVEN DIMENSIONS ONLY. DIMENSIONS ARE TO THE FACE OF FINISH, U.N.O. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERALLY THE LOCATIONS OF MATERIAL AND EQUIPMENT. THESE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. GENERAL CONTRACTOR IS RESPONSIBLE FOR REVISIONS, COORDINATING AND APPROVING ALL WORK TO BE DONE BY SUB CONTRACTORS. ANY SUBMITTAL TO ARCHITECT / ENGINEER SHALL BE REVIEWED BY THE C.M. BEFORE SUBMITTING TO ARCHITECT / ENGINEER. IF DIMENSIONS ARE IN QUESTION THE CONTRACTOR IS RESPONSIBLE FOR CONSULTING WITH THE TENANT AND OWNER BEFORE CONTINUING WITH THE WORK FOR POSSIBLE REDESIGN.
- VERIFY LOCATION OF ALL EQUIPMENT AND VERIFY SIZES, WALL OPENINGS, AND SUPPORT REQUIREMENTS WITH MANUFACTURER. PROVIDE OPENINGS, BRACING AND REINFORCEMENT AS REQUIRED BY MANUFACTURER.
- CONSTRUCTION MANAGER WILL SUPPLY SECURED STAGING AREA AND OFFICE TRAILER.
- CONSTRUCTION MANAGER WILL COMPLY WITH ENVIRONMENTAL AGENCIES.
- CONSTRUCTION MANAGER WILL SUPPLY TOILET FACILITIES FOR ALL TRADES.
- CONSTRUCTION MANAGER WILL COMPLY WITH DEWATERING AS NECESSARY.
- CONSTRUCTION MANAGER WILL BE RESPONSIBLE TO KEEP A CLEAN SITE AT ALL TIMES.
- TEMPORARY BRACING, GUYING AND TIE DOWNS OF THE STRUCTURE DURING ERECTION SHALL BE THE RESPONSIBILITY OF THE ERECTOR AND CONTRACTOR(S). THE ENGINEER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR THE ABSENCE, PRESENCE OR ADEQUACY OF ANY TEMPORARY BRACING. ALL EXISTING STRUCTURES THAT MAY BE AFFECTED BY THE NEW CONSTRUCTION SHALL BE BRACED AND PROTECTED AS REQUIRED.
- WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS (UNLESS NOTED OTHERWISE).
- ALL FURRED/ STUCCED WALLS SHALL HAVE FIRE BLOCKING AS REQUIRED BY CODE.
- VERIFY ALL EXISTING FIELD CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK. VERIFY ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS. IN THE EVENT OF DISCREPANCY, NOTIFY THE C.M. AND/OR THE ARCHITECT AND OBTAIN RESOLUTION BEFORE PROCEEDING. FAILURE TO NOTIFY THE ARCHITECT WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO PERFORM THE WORK AS INTENDED BY THE CONTRACT DOCUMENTS. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ANY AND ALL WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT.
- ALIGN PARTITIONS WITH FACE OF OTHER PARTITIONS OR COLUMNS UNLESS NOTED OTHERWISE. THE FACE OF EVERY PARTITION SHALL BE FLUSH WITHOUT OFFSETS. CHANGES IN PARTITION THICKNESS SHALL OCCUR AT CORNERS, PARTITION INTERSECTIONS OR OTHER FEATURES WHICH INTERRUPT THE PLANE OF THE PARTITION. FACE OF CORRIDOR PARTITIONS SHALL BE FLUSH FOR THE ENTIRE LENGTH OF THE CORRIDOR REGARDLESS OF CHANGES IN PARTITION THICKNESS. ALL ADJUSTMENTS SHALL BE MADE TO THE ROOM SIDE OF THE CORRIDOR PARTITION AND AT CORNERS.
- ALL GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL CONFORM TO THE APPROPRIATE STANDARDS IN ACCORDANCE WITH TABLE 2506.2 MBC 2015.
- REFER TO INTERIOR FINISHES REQUIREMENT ON LIFE SAFETY SHEET A.041. ALL INTERIOR FINISHES SHALL HAVE A CLASS C FLAME SPREAD OF 16 TO 200 AND A SMOKE DEVELOPMENT INDEX NOT GREATER THAN 450 IN ACCORDANCE WITH ASTM E84 OR UL T23. ALL INTERIOR CARPET INCLUDING THOSE IN EXIT ENCLOSURES SHALL COMPLY WITH MBC SECTION 804, DOC FF-1 "FILL TEST" (CPSC 16 CFR PART 1630) CONTRACTOR TO PROVIDE COMPLETE DOCUMENTATION TO FIELD INSPECTOR. FLOOR FINISH SHALL MEET A MIN. OF CLASS II FOR THE MIN. CRITICAL RADIANT FLUX INCLUDING THOSE IN EXIT ENCLOSURES. ALL FLOOR FINISHES SHALL BE IN ACCORDANCE WITH NFPA 253.
- ALL EXPOSED INSULATION SHALL HAVE A CLASS A FLAME SPREAD NOT GREATER THAN 25 AND A SMOKE DEVELOPMENT NOT GREATER THAN 450 IN ACCORDANCE WITH ASTM E84 REQUIREMENTS. OWNER TO PROVIDE DOCUMENTATION.
- ALL PLYWOOD, WOOD BLOCKING & NAILERS TO BE NON COMBUSTIBLE.
- INFILL AROUND ALL EXTERIOR WALL PENETRATIONS. FLASH WITH METAL & RUBBER AND SEAL TIGHT AT WALL.
- "EXIT" SIGNS SHALL HAVE RED LETTERS AT LEAST 6" HIGH AND THE MINIMUM WIDTH OF EACH STROKE SHALL BE 3/4" ON A WHITE BACKGROUND OR IN OTHER APPROVED DISTINGUISHABLE COLOR. THE WORD "EXIT" EXCEPT THE LETTER "I" SHALL HAVE LETTERS HAVING A WIDTH NOT LESS THEN 2 INCHES AND THE MINIMUM SPACING BETWEEN LETTERS SHALL NOT BE LESS THAN 3/8" OF AN INCH. SIGNS LARGER THAN THE MINIMUM SIZE REQUIRED SHALL HAVE LETTERS WIDTH AND SPACING IN THE SAME PROPORTION TO THE HEIGHT AS INDICATED IN THIS CODE. IF AN ARROW IS PROVIDED AS PART OF AN "EXIT" SIGN, THE CONSTRUCTION SHALL BE SUCH THAT THE ARROW CANNOT BE READILY CHANGED. THE WORD "EXIT" SHALL BE CLEARLY DISCERNIBLE WHEN THE SIGN IS ILLUMINATION MEANS IS NOT ENERGIZED.
- MIN. AVERAGE ILLUMINATION OF 10 FOOT CANDLES IS REQUIRED AT A HEIGHT OF 30' AFF OVER THE AREA OF ALL ROOMS.
- PROVIDE TYPEK DRAINWRAP SHEET FOR ALL E.F.I.S. WORK INDICATED ON DRAWINGS.
- ALL EXIT DOORS & MEANS OF EGRESS DOORS SHALL BE SIDE HINGED, NON-LOCKING & SWING IN DIRECTION OF EGRESS.
- ALL DOORS TO COMPLY WITH THE 2015 EDITION OF THE MICHIGAN BUILDING CODE SECTION 1008 AND ICC/ANSI A117.1-2009 SECTION 404.2
- DOOR HANDLES, PLUS LATCH, LOCKS AND OTHER OPERATING MAXIMUM HEIGHT OF 34"-48" ABOVE FINISH FLOOR. OPERATING DEVICES SHALL BE CAPABLE OF OPERATION WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. ALL MEANS OF EGRESS WHERE SERVING AN OCCUPANT LOAD OF 50 OR MORE PERSONS, THE OPENING FORCE FOR INTERIOR SIDE-SWING DOORS WITH- OUT CLOSERS SHALL NOT EXCEED 5-POUND FORCE. FOR ALL OTHER SIDE-SWING, SLIDING AND FOLDING DOORS, THE DOORS SHALL RELEASE WHEN SUBJCT TO A 15-POUND FORCE. THE DOOR SHALL SWING TO A FULL-OPEN POSITION WHEN SUBJECTED TO A 15 POUND FORCE. FORCES SHALL BE APPLIED TO THE LATCHSIDE.
- ALL MEANS OF EGRESS DOORS SHALL BE READILY OPERABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT.
- ALL EXIT DOORS & MEANS OF EGRESS DOORS SHALL BE SIDE HINGED, NON-LOCKING & SWING IN DIRECTION OF EGRESS.
- ALL GLASS SHALL BE SAFETY GLASS AS REQ'D PER SECTION 2406.2 AND SHALL PASS THE TEST REQMTS OF CPSC 16 CFR, PART 1201
- ALL EXIT DISCHARGE DOORS TO CONTAIN A RAISED CHARACTER SIGN STATING "EXIT" COINCIDING WITH ICC A117.1 SECTION 709.3 AS REQ'D BY MBC 2015 SECTIONS 110.4 (ITEM #2) AND 1011.4
- NO COMBUSTIBLES MATERIAL SHALL BE USED IN PLENUM SPACES.

**DESIGN LOADS:**

THE STRUCTURE IS DESIGN FOR THE FOLLOWING LIVE LOADS, IN ADDITION TO THE LATERAL LOADS AND SUPERIMPOSED DEAD LOADS AND SELF-WEIGHT OF THE STRUCTURE.

BUILDING OCCUPANCY CATEGORY: II

**LIVE LOADS:**

- ROOF SNOW LOAD
  - GROUND SNOW LOAD: 25 PSF
  - FLAT ROOF SNOW LOAD (P)<sub>s</sub> (MIN ROOF LOAD): 20 PSF
  - SNOW EXPOSURE FACTOR (C<sub>e</sub>): 1.0
  - SNOW LOAD IMPORTANCE FACTOR (I): 1.0
  - TEMPERATURE FACTOR (C<sub>t</sub>): 1.0
  - ADDITIONAL LOADING DUE TO DRIFTING AT CHANGES IN ROOF ELEVATIONS AND ICE AT OVERHANGS PER APPLICABLE CODE.

TOTAL ROOF DESIGN LOAD: 35 PSF

**WIND LOAD:**

- BASIC WIND SPEED (3-SECOND GUST): 115 MPH
- RISK CATEGORY: II
- EXPOSURE CATEGORY: A
- INTERNAL PRESSURE COEFFICIENT: +/- 0.18
- MAIN FORCE RESISTING STRUCTURAL SYS (EQUIVALENT STATIC FORCE):
- MIN UNIFORM: 16 PSF

**EARTHQUAKE DATA:**

- OCCUPANCY CATEGORY: II
- MAPPED SPECTRAL RESPONSE ACCELERATION S<sub>s</sub>=0.028g & S<sub>1</sub>=0.044g
- SITE CLASS D
- SPECTRAL RESPONSE COEFFICIENTS S<sub>D</sub>=0.091g & S<sub>D1</sub>=0.071g
- SEISMIC DESIGN CATEGORY A
- SECTION 11.7 (ASCE7-10) DESIGN REQUIREMENT FOR SD C A
- DESIGN BASE SHEER F<sub>x</sub>=0.01W<sub>x</sub>
- C<sub>s</sub>=SD<sub>s</sub> / (R/I)
- RESPONSE MODIFICATION FACTOR R=5
- SECTION 11.7 (ASCE7-10) DESIGN REQUIREMENT FOR SD C A

**FOUNDATION & EARTH WORK**

- FOOTINGS SHALL BEAR ON THE FIRM UNDISTURBED SOIL WITH A SAFE NET CAPACITY OF 2,000 PSF. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ENGINEER. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.
- EXCAVATION OF FILLS, ORGANIC MATERIALS AND OTHER UNSUITABLE MATERIAL IS TO BE REMOVED UNTIL THE MIN. SOIL BEARING IS OBTAINED PER AN ON-SITE SOILS ENGINEER. PAD FOOTING IS TO EXTEND TO THAT POINT. IF WATER IS ENCOUNTERED DURING EXCAVATION, CONTRACTOR TO CONSULT WITH DEWATERING CONTRACTOR FOR RECOMMENDATIONS.
- ALL FOOTINGS SHALL BE PLACED ONTO COMPACTED SUB GRADE OR ENGINEERED FILL (95% MINIMUM DENSITY AT OPTIMUM MOISTURE CONTENT). FOOTING ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH OF FOOTINGS WHERE A SAFE SOIL BEARING PRESSURE OF 2,000 PSF FOR COLUMNS AND WALL FOOTINGS IS EXPECTED. UNDERCUT AND PROVIDE ENGINEERED FILL AS NECESSARY TO ACHIEVE BEARING CAPACITY INDICATED.
- ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND CERTIFIED. CONTRACTOR TO SUBMIT TESTING REPORT TO CITY.
- NO FOOTINGS SHALL BE PLACED ONTO OR AGAINST SUB GRADES CONTAINING FROST OR ICE. CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ASSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHORS, BOLTS, INSERTS, ETC.
- AFTER EXCAVATING FOR ALL EARTH-SUPPORTED FLOOR AND STAIR SLABS, THE EXPOSED NATURAL SOIL SHALL BE THOROUGHLY COMPACTED PRIOR TO PLACING FILL.

**STEEL JOISTS:**

- ALL PROVISIONS OF THE RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS AS ADOPTED BY THE STEEL JOIST INSTITUTE SHALL BE ADHERED TO.
- STEEL JOIST BEARING ON STEEL BEAMS OR PLATES TO BE WELDED TO STEEL WITH 2" LONG PER "SLI". EXTEND BOTTOM CHORDS OF JOISTS AT COLUMNS TO A STABILIZER TAB. IF NO JOIST OCCURS AT COLUMNS, EXTEND BOTTOM CHORDS OF EACH ADJACENT JOIST AND CONNECT.
- STEEL JOISTS OR JOIST GIRDERS ARE TO BE FABRICATED BY A MEMBER OF THE STEEL JOIST INSTITUTE AND BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE STEEL JOIST INSTITUTE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS THAT CONFORM TO THE STANDARDS OF THE STEEL JOIST INSTITUTE (SJI) SPECIFICATIONS.
- PROVIDE X-BRACING AND BOTTOM CHORD BRACINGS AT LOCATIONS INDICATED BY MANUFACTURER AND SHALL COMPLY WITH SJI STANDARDS.
- COLD FORMED CHORDS ARE NOT PERMITTED.
- ALL HANGERS FOR CEILINGS, DUCTWORK, ELECTRICAL CONDUIT, PIPES, ETC. SHALL BE HUNG DIRECTLY OR SUPPORTED FROM OR AT THE PANEL POINTS OF THE JOIST.
- JOISTS SHALL HAVE ONE SHOP COAT OF PAINT. CHECK WITH ARCHITECT FOR COLOR.
- MECHANICAL FRAMING, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO MECHANICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL OBTAIN APPROVAL OF MECHANICAL AND OTHER TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXCESS COST RELATED TO VARIATION IN MECHANICAL REQUIREMENTS TO BE BORNE BY MECHANICAL CONTRACTOR.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND COORDINATING ALL UNITS AND ANY ROOF / FLOOR OPENINGS SUPPORTS WITH STEEL JOISTS FABRICATOR FOR FINAL SELECTION OF UNITS / EQUIPMENTS. UNITS SPECIFICATION SHEETS SHALL BE SUBMITTED TO ARCHITECT AND JOISTS MANUFACTURER PRIOR TO JOIST FABRICATION.

**REINFORCING STEEL:**

- DETAILINGS AND PLACING OF REINFORCING SHALL CONFORM TO AIC MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.
- SECURE REBAR AND HOLD IN PLACE WITH GALVANIZED METAL ACCESSORIES, OR PLASTIC BOOTED CHAIRS.
- ALL RE-STEEL SHALL BE INTERMEDIATE GRADE NEW BILLET STEEL, ASTM A5.
- PLACE (2) #5 BARS CONTINUOUS IN TOP AND BOTTOM OF ALL WALL FOOTINGS, GRADE BEAMS AND AT THE SIDES OF ALL OPENINGS, UNLESS NOTED OTHERWISE IN THE DRAWINGS.
- UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL CONCRETE WALLS 12" THICK SHALL BE REINFORCED WITH #4 @ 12" EACH WAY, AT EACH VERTICAL FACE.
- ANCHOR BOLT SIZE AND LOCATION SHALL BE FURNISHED BY BUILDING OR EQUIPMENT MANUFACTURER, AND SHALL BE INSTALLED BY THIS CONTRACTOR FROM APPROVED SHOP DRAWINGS.

**STRUCTURAL STEEL:**

- THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO THE PLANS AND SPECIFICATIONS. STRUCTURAL MEMBERS ARE NOT SELF-BRACING UNTL PERMANENTLY AFFIXED TO THE STRUCTURE AS DIRECTED. THE ARCHITECT/STRUCTURAL ENGINEERS ASSUME NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION MEANS AND METHODS OF CONSTRUCTION AND JOB SITE SAFETY ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR(S).
- ALL STRUCTURAL STEEL CONSTRUCTION TO CONFORM TO AISC-360 "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND AISC CODE OF STANDARD PRACTICE, UNLESS MODIFIED.
- ALL DETAILING FABRICATION AND ERECTION SHALL CONFORM TO MBC SECTION 2204 CODE, THE LATEST EDITION OF "AISC SPECIFICATION FOR STRUCTURAL FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND BRIDGES.
- CONTRACTOR TO USE AISC SPECIFICATIONS FOR THE MANUFACTURE OF ALL STRUCTURAL STEEL MEMBERS WITH TENSILE YIELD STRENGTH F<sub>y</sub> = 50 KSI, AND WHICH SHALL CONFORM TO ASTM A-492 STANDARDS, AND SHALL SUBMIT SHOP DRAWINGS. ALL STRUCTURAL STEEL SHALL BE ASTM A-492 (UNLESS NOTED OTHERWISE) HAVING F<sub>y</sub>=50,000 PSI.
- STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B OR ASTM A501. SEE DRAWINGS FOR EACH APPLICATION.
- ALL DRAWINGS SHOW THE INTENT AND CONCEPT OF THE CONNECTIONS BUT NOT THE DETAIL OF BOLTS AND WELDS. ALL CONNECTIONS NOT DETAILED SHALL BE DESIGNED, DETAILED AND MANUFACTURED BY THE FABRICATOR.
- SHOP CONNECTIONS SHALL BE WELDED FIELD CONNECTIONS USE ETOXX ELECTRODES, RUN PARALLEL TO THE TENSION MEMBERS, AND USE HIGH STRENGTH BOLTS WITH WASHER AND NUT.
- FIELD BOLT CONNECTIONS WITH ASTM A-325 OR ASTM A-490.
- PROVIDED PERIMETER STEEL, ANGLE FOR METAL, ROOF DECK SUPPORT AS REQUIRED, INCLUDING AROUND ALL ELEVATORS, STAIRS, AND OPENINGS IN FLOOR OR ROOF.
- ALL WELDING TO CONFORM TO AWS D11 "STRUCTURAL WELDING CODE". E TO XX LOTH HYDROGEN ELECTRODES CONFORMING TO AWS SPECIFICATION A51 SHALL BE USED FOR WELDING.
- ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING ELECTRIC ARC METHODS IN ACCORDANCE WITH LATEST EDITION OF "AWS CODE FOR WELDING IN BUILDING CONSTRUCTION". ETOXX ELECTRODES TO BE USED.
- UNLESS OTHERWISE NOTED, ALL FIELD CONNECTIONS SHALL BE FASTENED WITH 3/4 INCH DIAMETER ASTM A325-X BEARING TYPE (WITH THREADS EXCLUDED FROM SHEAR PLANE) BOLTS.
- UNLESS OTHERWISE SHOWN, ALL BEAM END CONNECTIONS SHALL BE DESIGNED TO SUPPORT ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN AISC MANUAL FOR GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED. FOR COMPOSITE BEAM CONNECTIONS SHALL BE DESIGNED FOR THREE-FOURTH OF THE TOTAL UNIFORM LOAD CAPACITY.
- ALL ANCHOR BOLTS SHALL CONFORM TO ASTM A-307-00.
- MINIMUM CONNECTION SHALL BE 3/4 INCH DIAMETER BOLTS OR A WELD DEVELOPING A FORCE OF 10 KIPS.
- PAINT ONE COAT OF PRIMER ON ALL EXPOSED SURFACES EXCEPT FOR THE FOLLOWING SURFACES WHICH WILL NOT BE PAINTED :
  - SURFACES THAT ARE IN CONTACT WITH CONCRETE.
  - CONTACT SURFACES IN FRICTION TYPE CONNECTIONS.
  - SURFACES WHICH METAL FLOOR DECK AND/OR SHEAR STUDS ARE TO BE WELDED.
  - SURFACES TO BE WELDED SHALL NOT BE PAINTED WITHIN THREE INCHES OF THE WELD.
- THE CONTRACTOR SHALL FURNISH AND INSTALL STEEL ANGLES WITH ANCHORS AT MECHANICAL CURBS WHERE INDICATED.
- FLOOR AND ROOF OPENINGS ARE TO BE FRAMED WITH STEEL ANGLES AS INDICATED. FRAMES TO BE CONNECTED TO THE PANEL POINTS OF BAR JOISTS OR GIRDERS AND TRUSSES.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ANGLES, PLATES, BARS, CLIPS, ETC., ATTACHED TO STRUCTURAL STEEL. VERIFY EXACT SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS WITH CONTRACTOR INVOLVED.
- PROVIDE "DUR-O-WALL" RE-STEEL- USE No. 8 LADDER TYPE ONLY, BLOCKWORK - EVERY 24" STEEL FABRICATOR TO PROVIDE SHOP DRAWINGS FOR ARCHITECTS APPROVAL PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL INCLUDE CONNECTION DETAILS FOR ALL STRUCTURAL STEEL MEMBERS. SPECIFY THAT STEEL JOIST AND JOIST GIRDER STRUCTURAL.

**CONCRETE WORK:**

- CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-14 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, AND ACI STANDARD 301-49 BY AMERICAN CONCRETE INSTITUTE, AND CRSI STANDARD FOR PLACING CONCRETE.
- DETAILS AND DETAILING OF CONCRETE REINFORCEMENT SHALL CONFORM TO ACI 318-14 STANDARDS AND ALSO TO THE MANUAL OF STANDARD PRACTICES AS PUBLISHED BY CRSI.
- UNLESS OTHERWISE NOTED ALL CONCRETE SHALL BE NORMAL WEIGHT AND SHALL DEVELOP MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:
  - TRENCH AND PAD FOOTINGS .....3,000 PSI
  - FOUNDATION WALLS AND PIERS .....3,000 PSI
  - INTERIOR SLAB-ON-GRADE .....3,000 PSI
  - EXTERIOR SLAB ON GRADE .....3,500 PSI (AIR ENTRAINED)
- CONCRETE OVER METAL DECK FOR SUPPORTED FLOORS AS INDICATED ON THE PLANS SHALL BE 145 PCF AND SHALL DEVELOP MINIMUM COMPRESSIVE STRENGTH OF MIN. 2,500 PSI AT 28 DAYS.
- CONCRETE EXPOSED TO WEATHER SHALL BE AIR -ENTRAINED. AIR CONTENT TO BE 6% +/- 1 %
- ALL REINFORCING STEEL SHALL BE DEFORMED BARS GRADE 60 CONFORMING TO THE LATEST EDITION OF ASTM A-615/A 615M-00 OR ASTM-616 AND HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185-85 USING COLD DRANN WIRE CONFORMING TO ASTM A82-01.
- UNLESS OTHERWISE NOTED, MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE 3/4 INCH FOR SLABS, 1.5 INCH FOR BEAMS, COLUMNS AND PIERS, AND 1 INCH FOR WALLS. ALL CONCRETE EXPOSED TO WEATHER OR EARTH-FILL SHALL HAVE A MINIMUM COVER OF 1.5 INCHES FOR #5 BARS OR SMALLER, 2 INCHES FOR BARS LARGER THAN #5 AND 3 INCH FOR CONCRETE PLACED AGAINST EARTH.
- VERIFY LOCATION AND DIMENSION OF ALL OPENINGS AND ALL EMBEDDED SLEEVES, FLOOR DRAINS, ROOF SUMPS, ETC., AS REQUIRED FOR DIFFERENT TRADES PRIOR TO POURING OF CONCRETE.
- UNLESS OTHERWISE NOTED, PROVIDE VERTICAL DOWELS FROM FOOTINGS TO PIERS AND TO WALLS OF SAME SIZE AND SPACING AS VERTICAL REINFORCING. OFFSET FOR DOWELS AS REQUIRED. DOWELS TO EXTEND 24 BAR DIAMETERS INTO EACH MEMBER AT THE JOINT.
- CONSTRUCTION JOINTS SHALL BE PLACED AT THE CENTER OF SPANS WITH A VERTICAL BULKHEAD.
- SLABS, BEAMS AND FOOTINGS SHALL BE PLACED WITH OUT HORIZONTAL JOINTS.
- PROVIDE HORIZONTAL BENT BARS AT ALL CORNERS AND INTERSECTIONS OF CONCRETE WALL OR GRADE BEAMS OF SAME SIZE AND SPACING AS HORIZONTAL WALL OR BEAM REINFORCING. USE BENT DOWELS TO DEVELOP ANCHORAGE, IF NECESSARY. DOWELS TO EXTEND 24 BAR DIAMETERS INTO EACH MEMBER.

**METAL DECK:**

- METAL DECK SHALL CONFORM TO ALL REQUIREMENTS OF "BASIC DESIGN SPECIFICATION" AS ADOPTED BY THE STEEL DECK INSTITUTE (S.D.I.).
- ALL METAL DECK WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF AISI, SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS, AIS-STRUCTURAL WELDING CODE D1-1, STEEL DECK INSTITUTE.
- UNLESS NOTED, ROOF DECK SHALL BE MANUFACTURED FROM STEEL CONFORMING TO ASTM A1008, 33 KSI.
- LOADS SHALL NOT BE HUNG FROM ROOF DECK.
- METAL DECK TO BE CONNECTED TO SUPPORTING MEMBERS AS PER RECOMMENDATION BY SDI OR AS SPECIFIED.
- THE CONTRACTOR SHALL FURNISH ALL ACCESSORIES INCLUDING CLOSURES, "Z" CLOSURES, COLUMN CLOSURES, SCREED ANGLES AND GIRDER FILLERS, AS REQUIRED.
- ROOF DECK SHALL HAVE MANUFACTURER'S STANDARD RUST INHIBITIVE PAINT.
- METAL DECK SHALL BE CONTINUOUS OVER THREE SPANS WHEREVER INDICATED. SINGLE AND DOUBLE SPANS SHALL COMPLY WITH "STEEL DECK INSTITUTE" REQUIREMENT.
- ALL METAL DECKING SHALL BE WELDED TO THE STEEL BEAM WITH A 3/4 INCH FLUG WELD AT THE FLUTES NOT EXCEEDING 12 INCHES APART.
- ALL INTERIOR ROOF SUMPS SHALL HAVE AN OVER FLOW 3" ABOVE ROOF SURFACE

**MASONRY WORK:**

- MATCH EXISTING BRICK FOR THE ADDITION AND VERIFY WITH OWNER.
- PROVIDE MASONRY CONTROL JOINTS FOR ALL MASONRY WALLS AT A MAXIMUM 20'-0" APART, AND MAXIMUM OF 5'-0" FROM EACH WALL CORNER. BOND BEAM STEEL TO CONTINUE THROUGH JOINTS.
- MASONRY CONSTRUCTION/ DESIGN STANDARD TO COMPLY WITH ACI 530-11/ ASCE 5-11 / TMS 402 "AMERICAN STANDARD BUILDING CODE REQUIREMENT FOR MASONRY" BY US DEPARTMENT OF COMMERCE, MISC.PUB. 211 AND ASA A41
- THE REFERENCE MATERIAL STANDARD FOR EACH MASONRY CONSTRUCTION MATERIAL USED ON THIS PROJECT INCLUDING MASONRY UNITS, MORTAR AND METAL ACCESSORIES.
  - MASONRY: ASTM C90-01a FOR CONCRETE BLOCK
  - ASTM C62-01 FOR BRICK
  - ASTM C270-01a FOR MORTAR
  - REINF WIRE: ASTM A82-01
- BLOCK - GRADE A, LOAD BEARING UNITS ASTM-C90-01a, IN ACCORD WITH CONCRETE MASONRY ASSOCIATION SPECIFICATIONS.
- ALL MASONRY BEARING STEEL BEAMS AND LINTELS TO BEAR 8" MINIMUM ON THREE COURSES SOLID MASONRY, WITH 2 - 3/4" BOLTS EACH END, UNLESS OTHERWISE NOTED.
- PROVIDE BULLNOSE EDGE FOR ALL EXPOSED C/M EDGES. SEE TYPICAL MASONRY DETAILS.
- UNLESS OTHERWISE NOTED, PROVIDE 4" x 4" x 5/16" ANGLE (L.L.V.) LINTEL FOR EACH 4' OF MASONRY FOR SPANS UP TO 5'-0" MAXIMUM.
- ALL DOUBLE ANGLE LINTELS SHALL BE WELDED BACK TO BACK WITH A 3/16" FILLER WELD WITH MINIMUM 2 INCH STITCH WELD EVERY 8 INCHES.
- MASONRY COMPRESSIVE STRENGTH F'<sub>m</sub> TO BE 1,500 PSI (MINIMUM) ALL BLOCK SHALL CONFORM WITH ASTM C90-01a AND C145, TYPE 1, GRADE N, MORTAR - TYPE M OR S, 1,900 PSI. MORTAR - TYPE TO CONFORM TO ASTM C270-01a.
- UNLESS OTHERWISE NOTED, PROVIDE 4" x 3 1/2" x 5/16" ANGLE (L.L.V.) LINTEL FOR EACH 4' OF MASONRY FOR SPANS UP TO 5'-0" MAXIMUM.
- ALL MASONRY BEARING STEEL BEAMS AND LINTELS TO BEAR 8" MINIMUM ON THREE COURSES SOLID MASONRY, WITH 2 - 3/4" BOLTS EACH END, UNLESS OTHERWISE NOTED.
- PROVIDE "DUR-O-WALL" REINFORCEMENT STAGGERED AT 16" O.C. USE LADDER TYPE WITH ADJUSTABLE VENEER TIES FOR ALL BLOCK AND BRICK VENEER WALLS.

**SPECIAL INSPECTIONS:**

BUILDER SHALL BE SELECT AND PROVIDE A THIRD PARTY TESTING AGENCY - PER SECTION 1705 MBC 2015. THE SPECIAL INSPECTIONS SHALL INCLUDE:
 

SECTION 1705.3	STEEL CONSTRUCTION	CONCRETE CONSTRUCTION
SECTION 1705.4	MASONRY CONSTRUCTION	
SECTION 1705.6	SOILS	
SECTION 1705.8	CAST IN PLACE DEEP FOUNDATIONS	
SECTION 1705.11	SPECIAL INSPECTIONS FOR WIND RESISTANCE	
SECTION 1705.12	SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE	
SECTION 1705.13	TESTING FOR SEISMIC RESISTANCE.	
SECTION 1705.16	EXTERIOR INSULATION AND FINISH SYSTEM SYSTEM (EIFS). REQUIRED IF DRAINWRAP SHEET IS NOT PROVIDED.	

ISSUED FOR	Item D.
PERMITS	10/22/2021

**ARCHITECTURAL DESIGN**

**RESIDENTIAL COMMERCIAL INDUSTRIAL**

**G.A.V. ASSOCIATES, INC**  
 3800 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9191  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
SSA	SA	SA
SCALE :		
FILE NAME : 21096_A001		
JOB # : 21096		
SHEET TITLE		
GENERAL NOTES AND SPECIFICATIONS		
SHEET #		
A.001		



**WALL LEGEND:**

- 4" BRICK & 4" PRE-FINISHED BURNISHED FACE CMU VENEER
  - 2 3/4" CAVITY WITH 1-1/2" HIGH R VALUE XPS RIGID BOARD INSULATION (R11 MINIMUM) AND AIR BARRIER
  - 8" CMU WALL
  - REFER TO BUILDING ELEVATION FOR COURSING AND MATERIAL.
  - REINFORCEMENT: #5 VERTICAL @ 48" O.C. DOWELS TO BE 2'-0" INTO FOOTINGS AND 3'-0" ABOVE.
- 
- 8" CMU WALL WITH:
    - #5 VERTICAL @ 48" O.C. DOWELS TO BE 2'-0" INTO FOOTING AND 3'-0" ABOVE
    - CORES FILLED 1/4" FOAM INSULATION
- 
- 6"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES.
  - (COMPOSITE) STUD TYPE C83-600S200-43 (18) OR APPROVED EQUAL TO MEET WALL SPAN AT 10 PSF AND L/360.
  - EXTEND STUDS AND GYPSUM TO UNDERSIDE OF FLOOR / ROOF DECK U.O.
  - DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION.
  - DIAGONAL BRACING TO STRUCTURE ABOVE AT 4'-0".

**WALL LEGEND NOTES:**

1. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
2. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK, STONE OR CMU VENEER WALLS.
3. PROVIDE STONE ANCHORS AT TOP AND SIDES FOR EVERY PIECE AND PER STONE FABRICATOR.
4. KEEP HOLES: PROVIDE ONE PIECE SINGLE-PLY FLASHING (MINIMUM OF 1 CMU COURSE WITH END DAMS) AND ONE PIECE METAL FLASHING WITH HEMMED DRIP EDGE. PROVIDE PARTIALLY OPEN HEAD JOINT KEEP HOLES @ 24" O.C. MINIMUM OF TWO HOLES OVER WINDOWS AND DOORS. GROUT AIR SPACE SOLID UNDER FLASHINGS. PROVIDE WASHED PEA STONE FOR PROPER DRAINAGE.
5. EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A SMOKE TIGHT CONSTRUCTION OR FIRE RATE CONSTRUCTION AS INDICATED. SEE PLANS FOR LOCATIONS OF SMOKE / FIRE WALLS.
6. GROUT ALL CMU WALLS SOLID AT RE-BARS AND FIRST TWO COURSES OVER EXISTING MASONRY OR FOUNDATIONS. DOWEL INTO EXISTING MASONRY.
7. PROVIDE A MASONRY CONTROL / EXPANSION JOINTS FOR ALL NEW WALLS OVER 20'-0" IN RUN OR MORE. MAXIMUM SPACING OF 25'-0".
8. PROVIDE CONTINUOUS 8"/2" BOND BEAM (B.B.) W/ (2) #5 BARS. VERTICAL WALL BARS TO CONTINUE THRU B.B. & HOOK TO B.B. STEEL FOR UPLIFT CONTINUITY. GROUT ONE COURSE ABOVE AND ONE BELOW B.B. PROVIDE METAL LATH OR WIRE SCREEN UNDER B.B. TO CONFINE GROUT. LAP B.B. MINIMUM OF 48" TO ACCOMMODATE ELEVATION CHANGES FOR THE CORRIDOR WALLS.
9. REFER TO BUILDING ELEVATIONS AND SECTIONS FOR COURSING AND OTHER MATERIALS.

ISSUED FOR	Item D.
OWNER REVIEW	08.27.2021
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
**RESIDENTIAL COMMERCIAL INDUSTRIAL**  
**G.A.V. ASSOCIATES, INC.**  
 24051 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9191  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
SSA	GA	GA

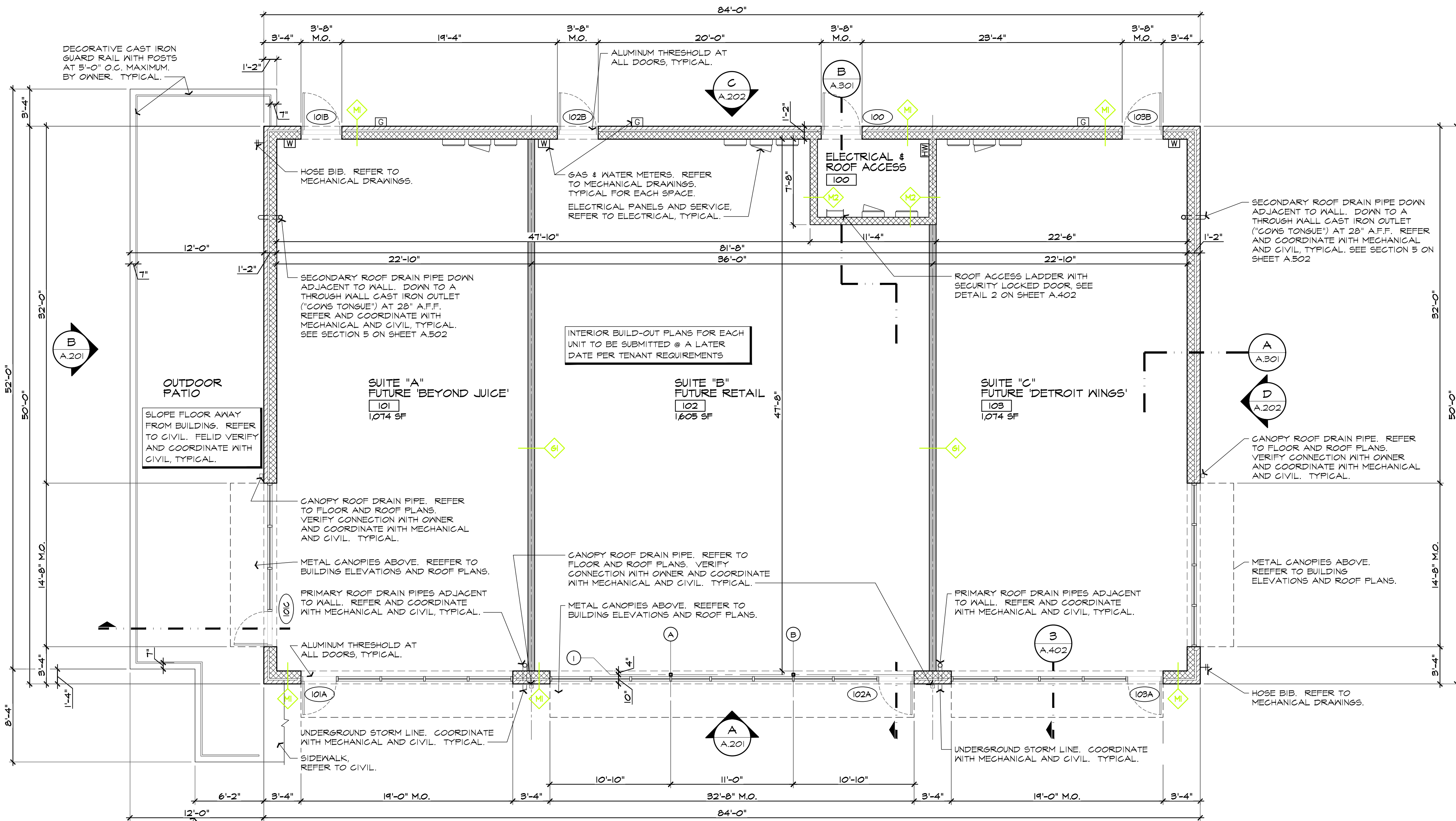
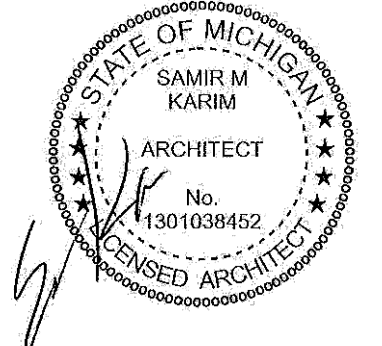
SCALE :

FILE NAME : 21096\_A101

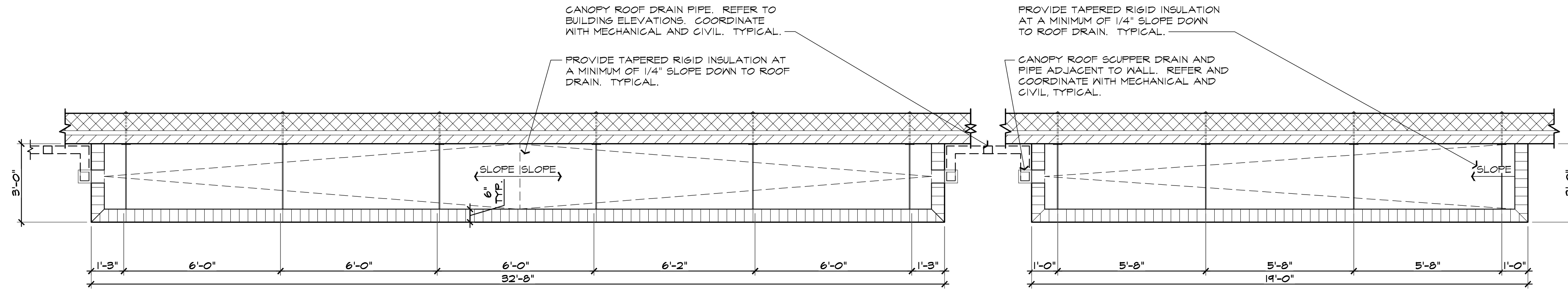
JOB # : 21096

SHEET TITLE  
 FLOOR PLAN

SHEET #  
**A.101**



**FLOOR PLAN**  
 SCALE: 3/16" = 1'-0"  
 NORTH



**2 ENLARGED CANOPY PLAN**  
SCALE: 3/8" = 1'-0"  
NORTH

**1 ENLARGED CANOPY PLAN**  
SCALE: 3/8" = 1'-0"  
NORTH

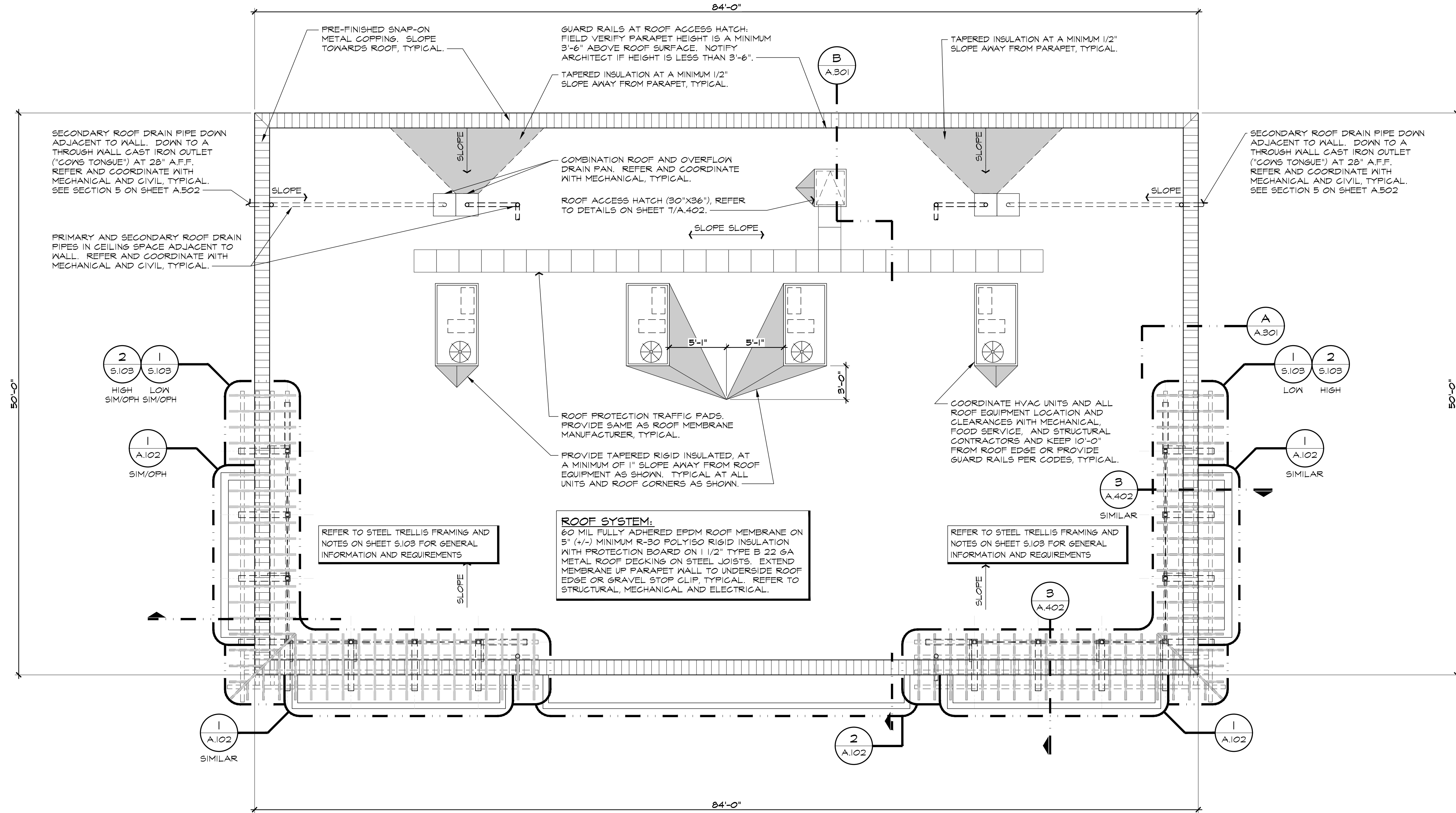
**CANOPY ROOF SYSTEM:** 60 MIL FULLY ADHERED EPDM ROOF MEMBRANE ON POLYISO TAPERED RIGID INSULATION ON 1 1/2" TYPE B 22 GA METAL ROOF DECKING ON STEEL CHANNELS. EXTEND MEMBRANE UP PARAPET WALL TO UNDERSIDE ROOF EDGE OR GRAVEL STOP CLIP, TYPICAL. REFER TO STRUCTURAL, MECHANICAL AND ELECTRICAL.

**ROOF PLAN GENERAL NOTES:**

1. SEE MECHANICAL DRAWINGS FOR ALL ROOF EQUIPMENT
2. MAINTAIN MINIMUM OF 10 FEET BETWEEN RTU'S INTAKES AND EXHAUST.
3. VERIFY RTU SIZE WITH MANUFACTURER FOR CURB SIZES AND LOCATIONS.
4. COORDINATE ROOF CONDUCTORS WITH PLUMBING, STEEL AND CONCRETE FOUNDATION CONTRACTORS.
5. COORDINATE WITH MECHANICAL ROOF VENT PIPE LOCATIONS (NOT SHOWN).

**STORM DRAINAGE:**

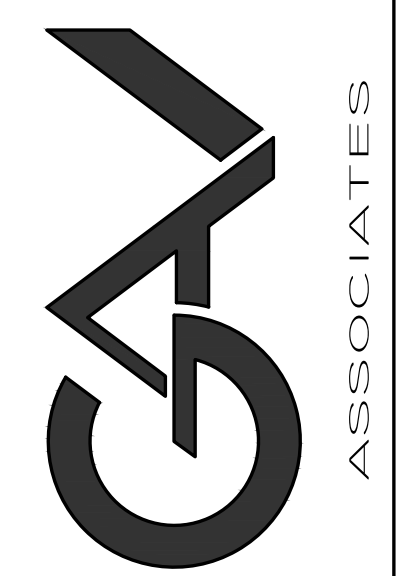
ROOF AREA = 3,850 SF  
VERTICAL WALL AREA = 258 L.F. X 9.0 HT. = 1774 SF  
0.0291 GPM/SF X 4624 SF = 135 GPM



**FLOOR PLAN**  
SCALE: 3/16" = 1'-0"  
NORTH

ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL  
G.A.V. ASSOCIATES, INC.  
34051 ORCHARD LAKE RD., STE. 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9191  
WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
UNION LAKE & COOLEY LAKE ROADS  
COOLEY LAKE ROAD  
WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
SSA	GA	GA

SCALE :

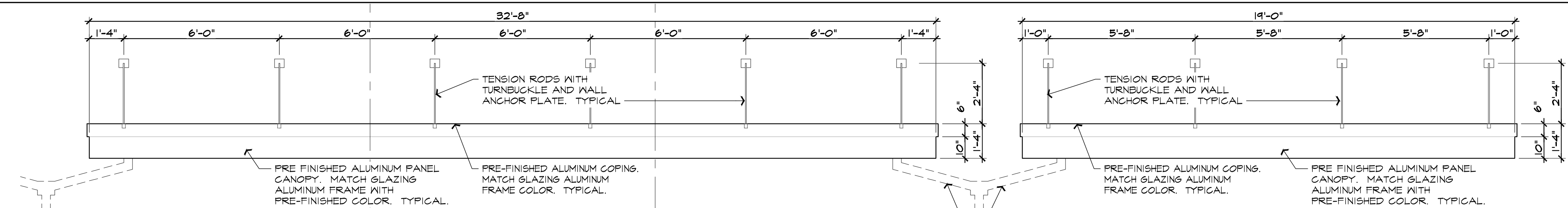
FILE NAME : 21096\_A102

JOB # 21096

SHEET TITLE  
ROOF PLAN

SHEET #  
**A.102**





**BUILDING ELEVATIONS GENERAL NOTES:**

- REFER TO SITE APPROVAL RENDERING FOR COLOR SELECTION AND COORDINATE WITH OWNERS. COLOR MUST MATCH RENDERING AS CLOSE AS POSSIBLE OR BE APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
- REFER TO REFLECTED CEILING PLANS AND ELECTRICAL DRAWINGS FOR LIGHTING AND POWER ON THE ELEVATIONS.
- REFER TO STEEL TRELLIS FRAMING AND NOTES ON SHEET S.103 FOR GENERAL INFORMATION AND REQUIREMENTS.

**MATERIAL LEGEND:**

COORDINATE ALL SELECTIONS WITH OWNER AND REFER TO WALL SECTIONS AND DETAILS:

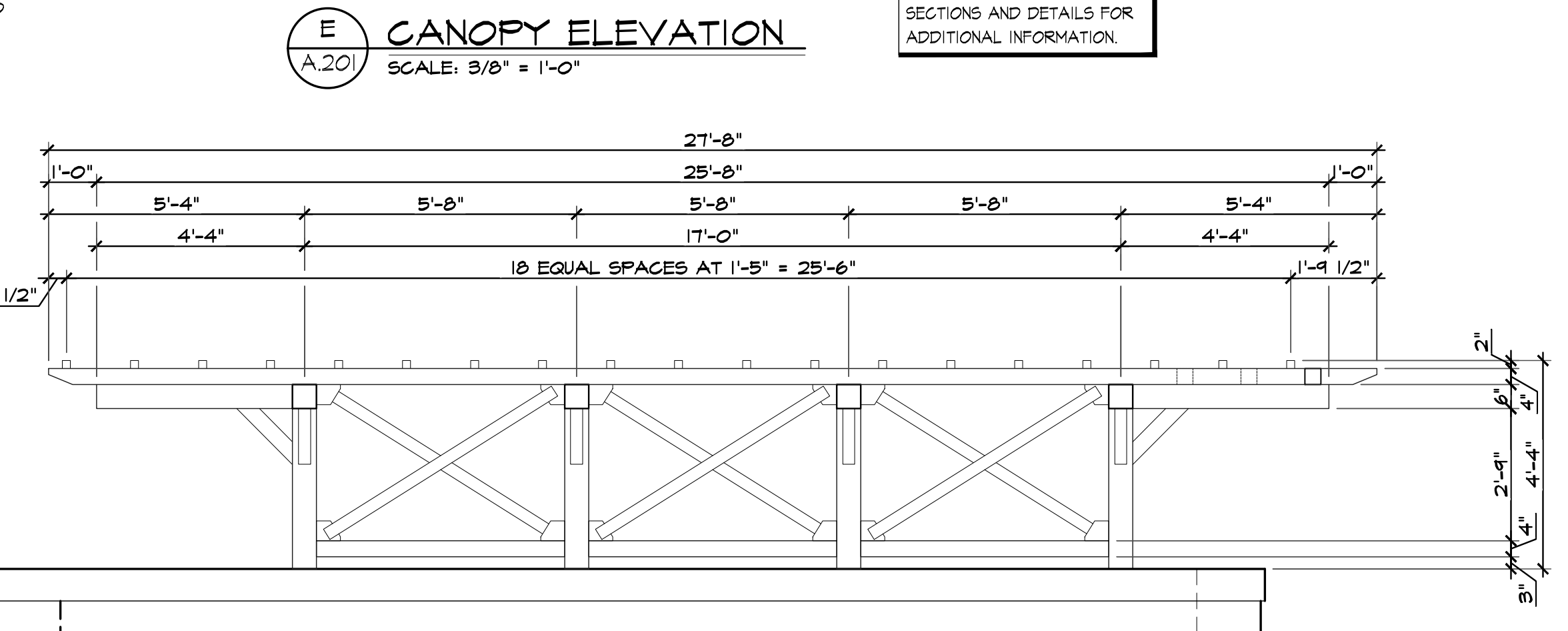
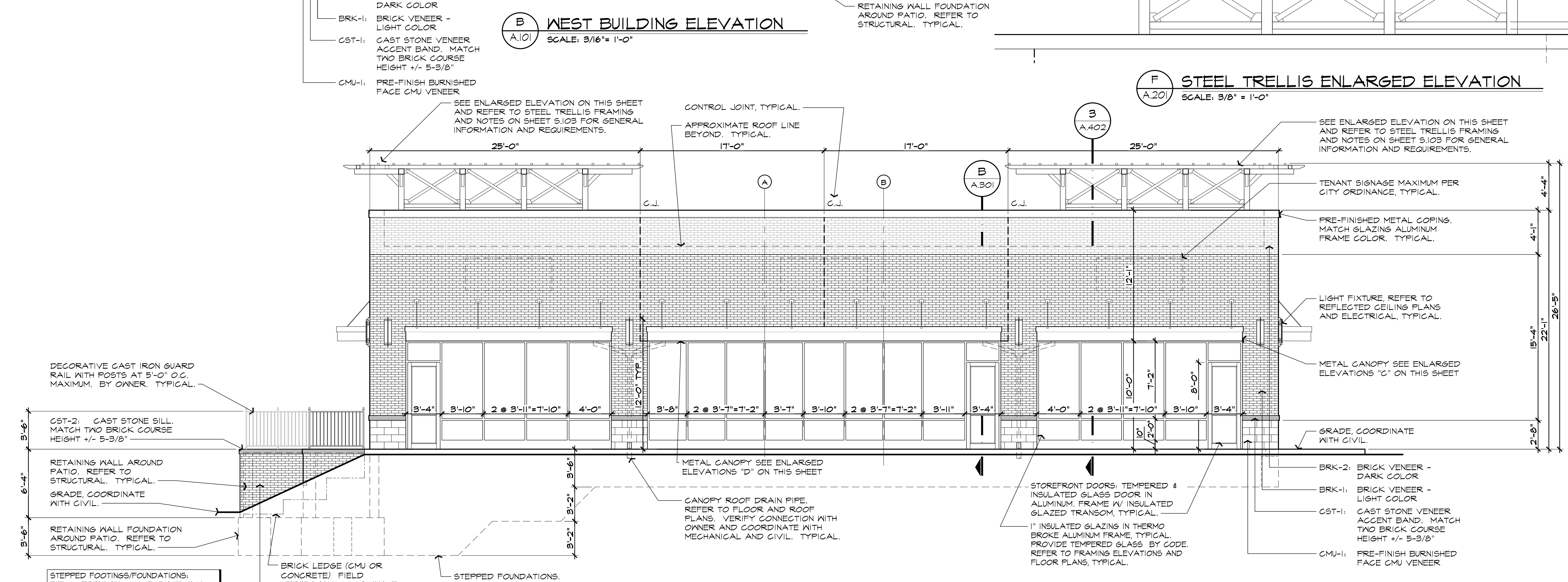
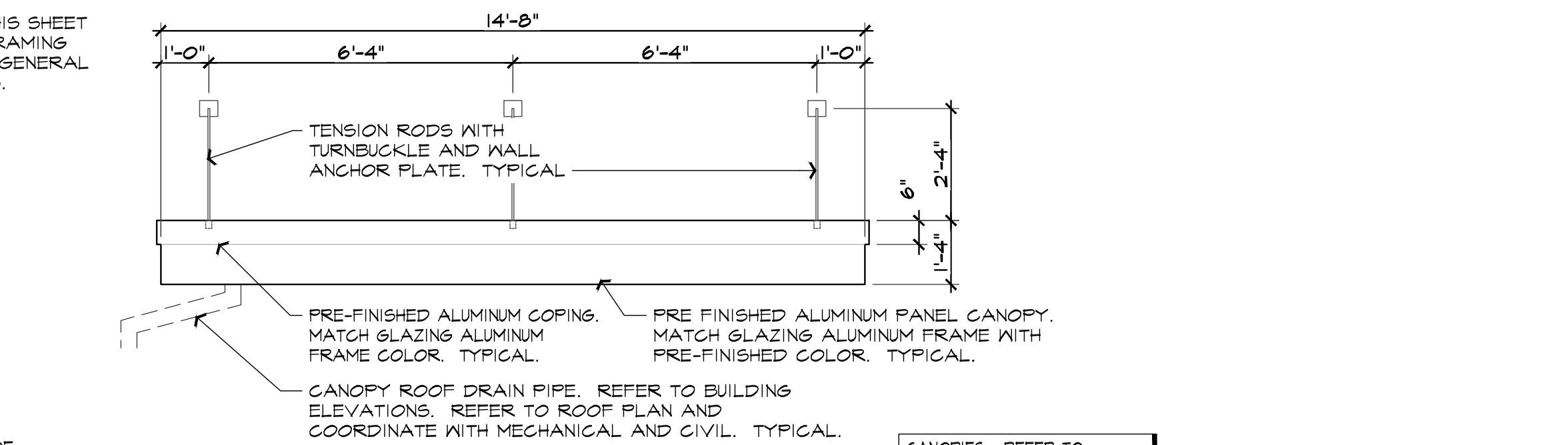
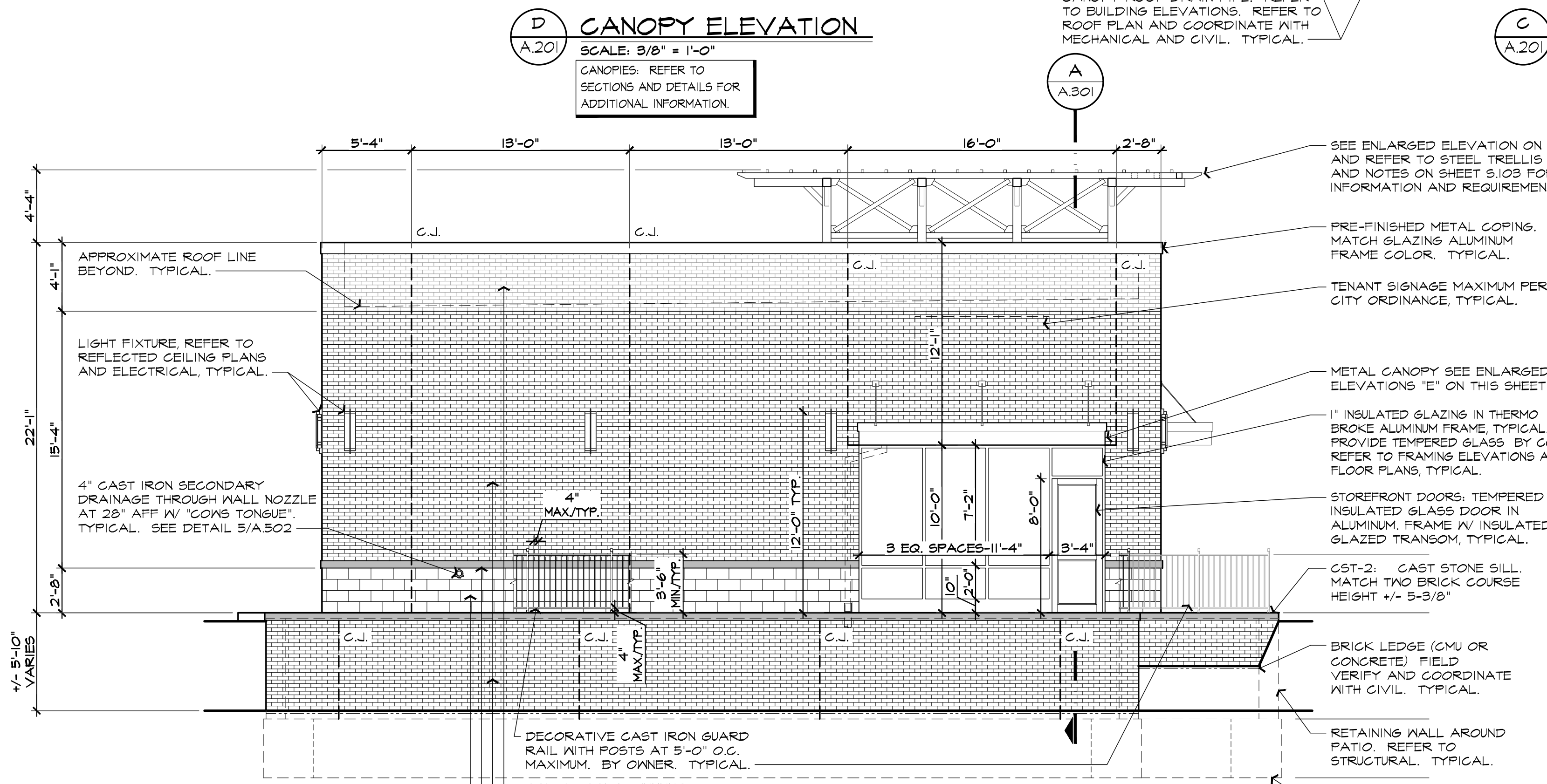
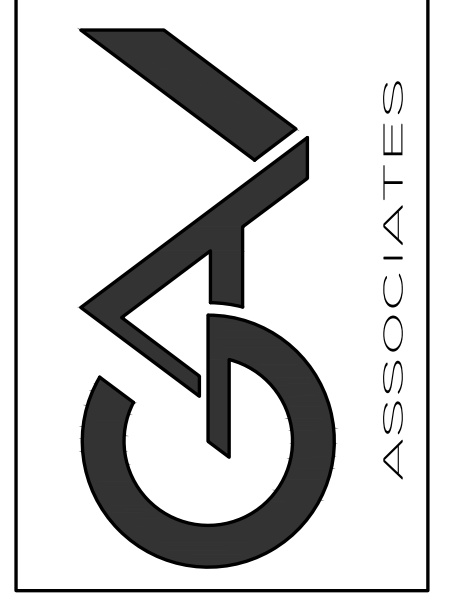
- BRK-1: BRICK VENEER - LIGHT COLOR
- BRK-2: BRICK VENEER - DARK COLOR
- CMU-1: PRE-FINISH BURNISHED FACE CMU VENEER
- CST-1: CAST STONE VENEER ACCENT BAND. MATCH TWO BRICK COURSE HEIGHT +/- 5-3/8"
- CST-2: CAST STONE SILL. MATCH TWO BRICK COURSE HEIGHT +/- 5-3/8"

ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**

RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL

G.A.V. ASSOCIATES, INC.  
34851 ORCHARD LAKE RD., STE. 188A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9191  
WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
UNION LAKE & COOLEY LAKE ROADS  
COOLEY LAKE ROAD  
WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
	SA	SA
SCALE :		
FILE NAME : 21046_A201		
JOB # : 21046		
SHEET TITLE		
BUILDING ELEVATIONS		
SHEET #		
A.20		





ISSUED FOR	Item D.
PERMITS	10.22.2021

**BUILDING ELEVATIONS GENERAL NOTES:**

- REFER TO SITE APPROVAL RENDERING FOR COLOR SELECTION AND COORDINATE WITH OWNERS. COLOR MUST MATCH RENDERING AS CLOSE AS POSSIBLE OR BE APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
- REFER TO REFLECTED CEILING PLANS AND ELECTRICAL DRAWINGS FOR LIGHTING AND POWER ON THE ELEVATIONS.
- REFER TO STEEL TRELLIS FRAMING AND NOTES ON SHEET S.103 FOR GENERAL INFORMATION AND REQUIREMENTS

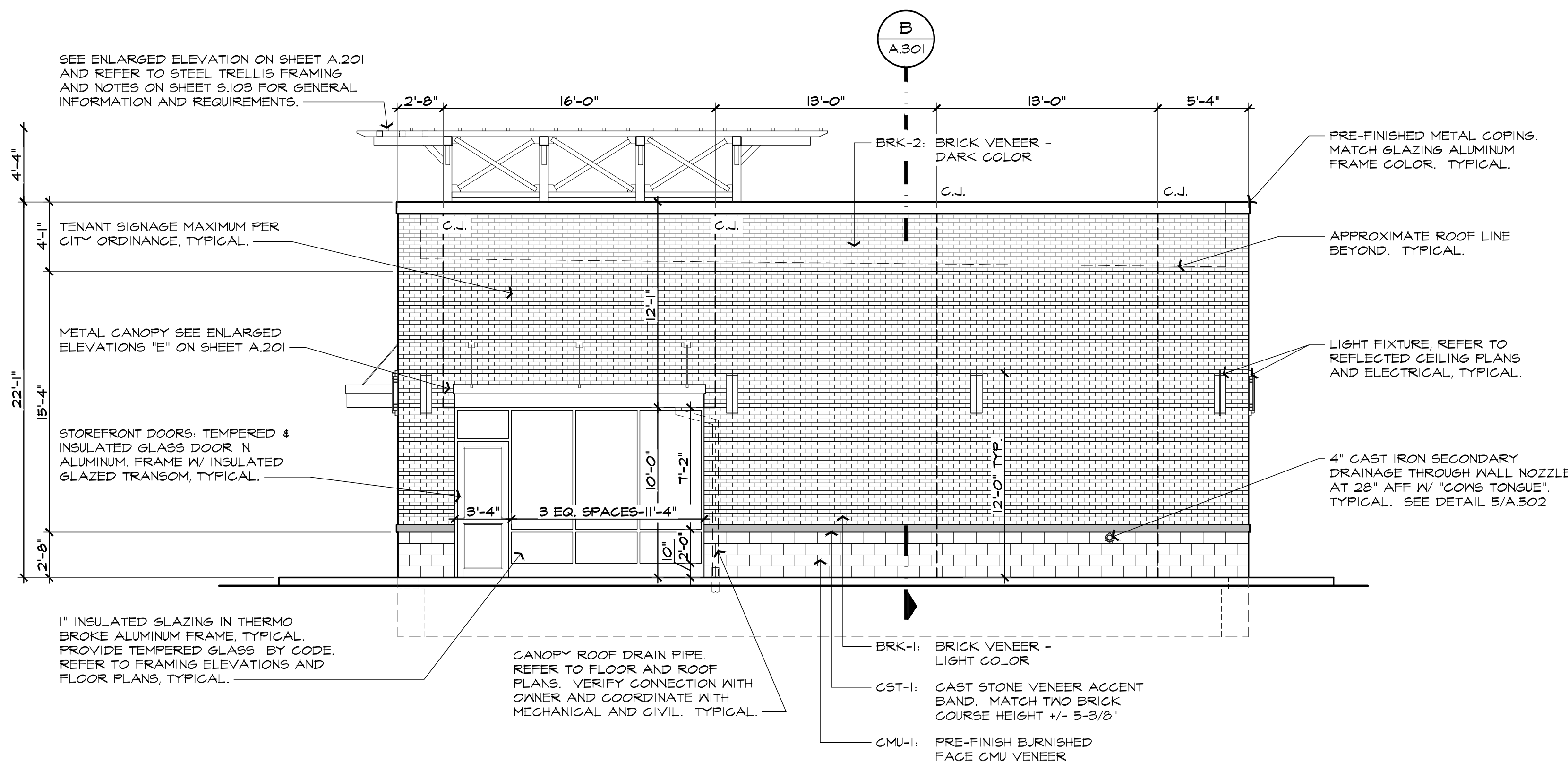
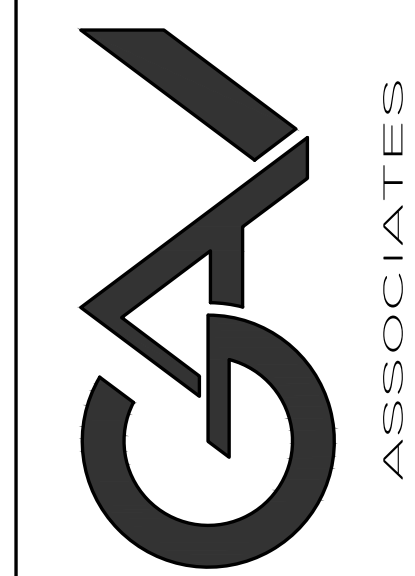
**MATERIAL LEGEND:**

- COORDINATE ALL SELECTIONS WITH OWNER AND REFER TO WALL SECTIONS AND DETAILS.
- BRK-1: BRICK VENEER - LIGHT COLOR
  - BRK-2: BRICK VENEER - DARK COLOR
  - CMU-1: PRE-FINISH SPLIT FACE CMU VENEER
  - CST-1: CAST STONE VENEER ACCENT BAND. MATCH TWO BRICK COURSE HEIGHT +/- 5-3/8"
  - CST-2: CAST STONE SILL. MATCH TWO BRICK COURSE HEIGHT +/- 5-3/8"

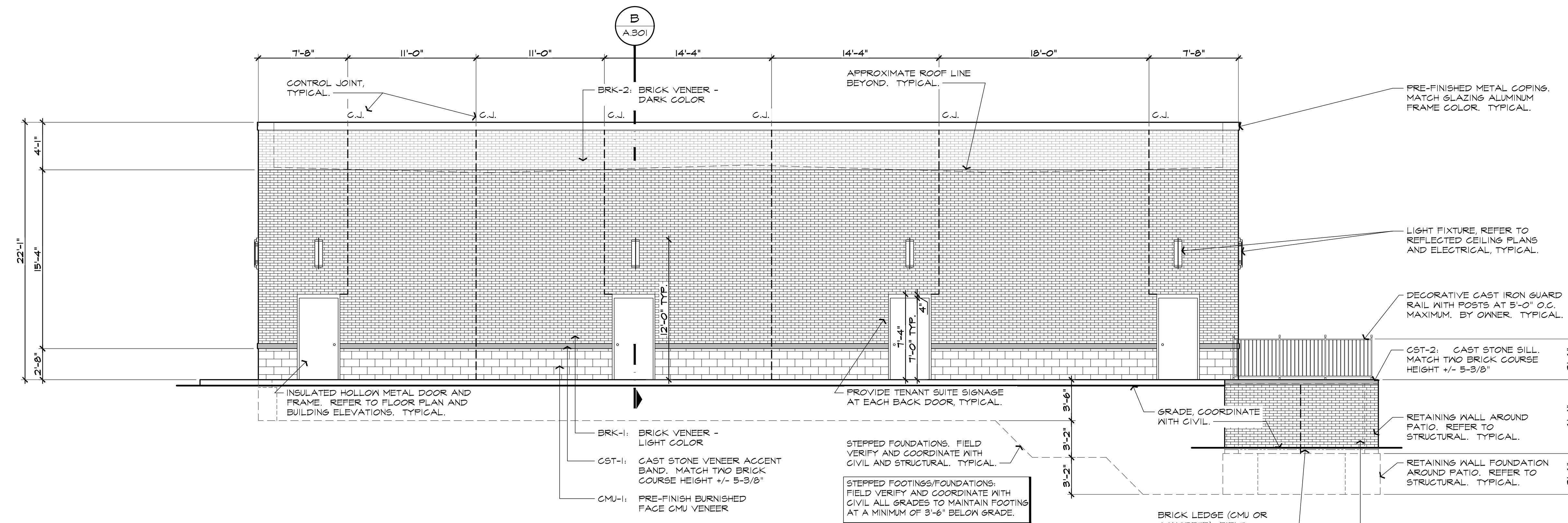
**ARCHITECTURAL DESIGN**

RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL

G.A.V. ASSOCIATES, INC.  
24051 ORCHARD LAKE RD., STE. 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9191  
WEB: WWW.GAVASSOCIATES.COM



**D EAST BUILDING ELEVATION**  
SCALE: 3/16" = 1'-0"



**C NORTH BUILDING ELEVATION**  
SCALE: 3/16" = 1'-0"

4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
UNION LAKE & COOLEY LAKE ROADS  
COOLEY LAKE ROAD  
WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
	SA	SA

SCALE :

FILE NAME : 21096\_A202

JOB # : 21096

SHEET TITLE  
BUILDING  
ELEVATIONS

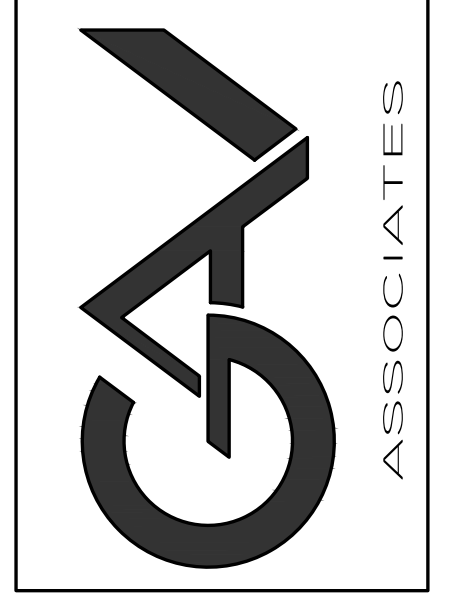
SHEET #  
A.202



ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
 RESIDENTIAL  
 COMMERCIAL  
 INDUSTRIAL

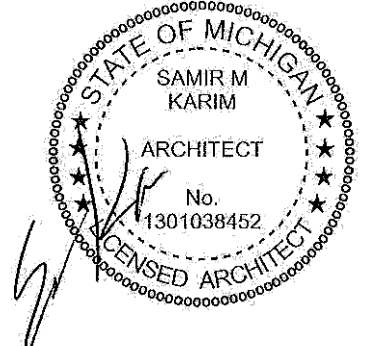
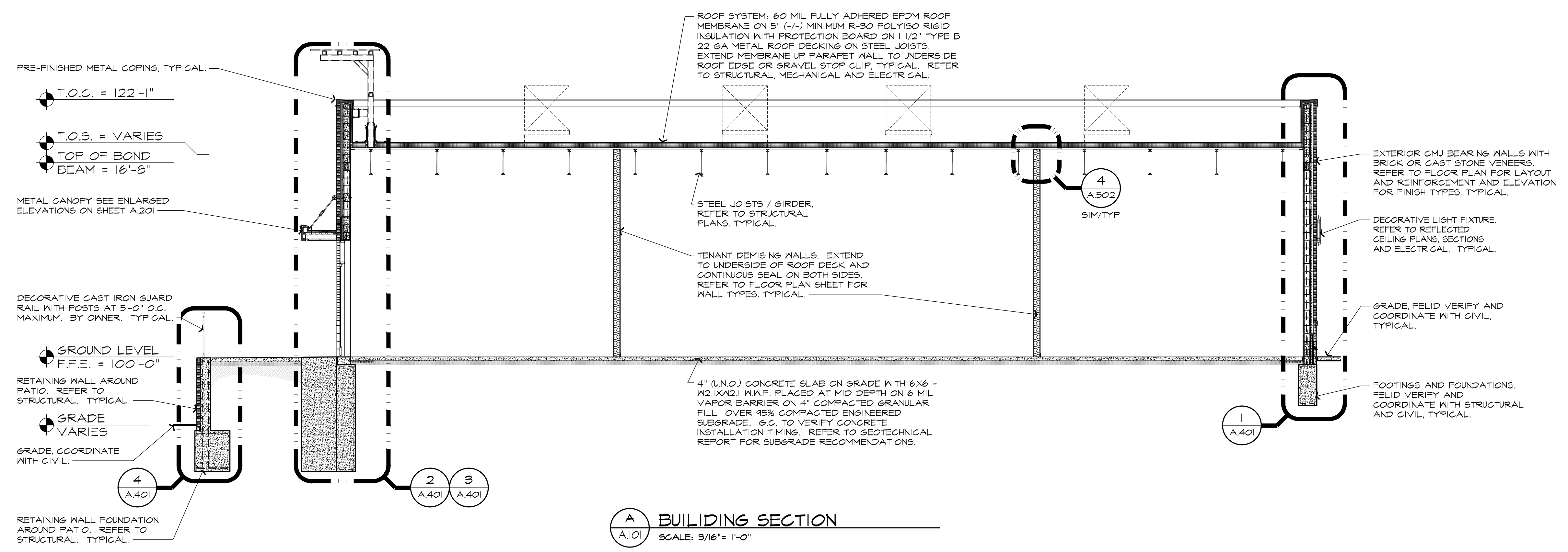
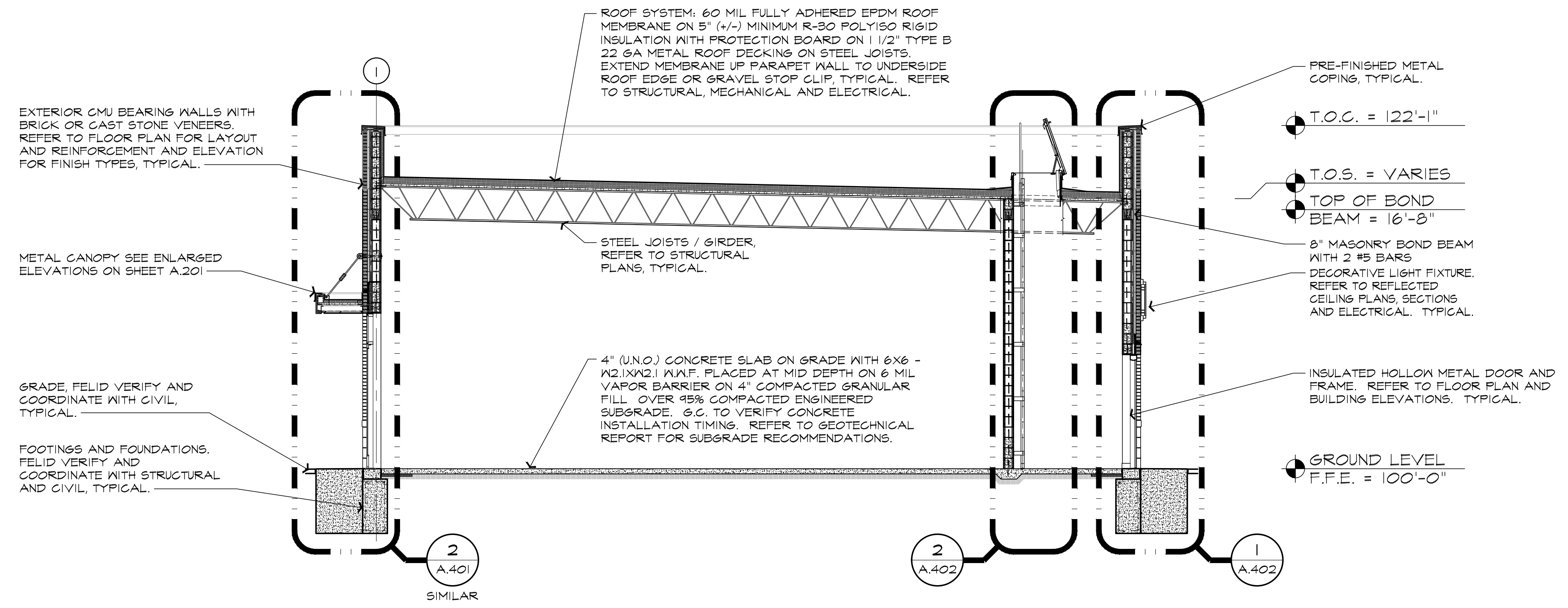
G.A.V. ASSOCIATES, INC.  
 24051 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9191  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
	SA	SA
SCALE :		
FILE NAME : 21096_A301		
JOB # : 21096		
SHEET TITLE		
BUILDING SECTIONS		
SHEET #		
A.30		





ISSUED FOR	Item D.
PERMITS	10.22.2021

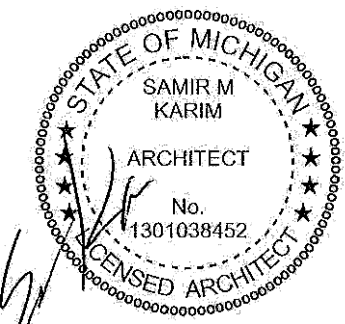
**ARCHITECTURAL DESIGN**  
**RESIDENTIAL COMMERCIAL INDUSTRIAL**  
 G.A.V. ASSOCIATES, INC.  
 34051 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9191  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

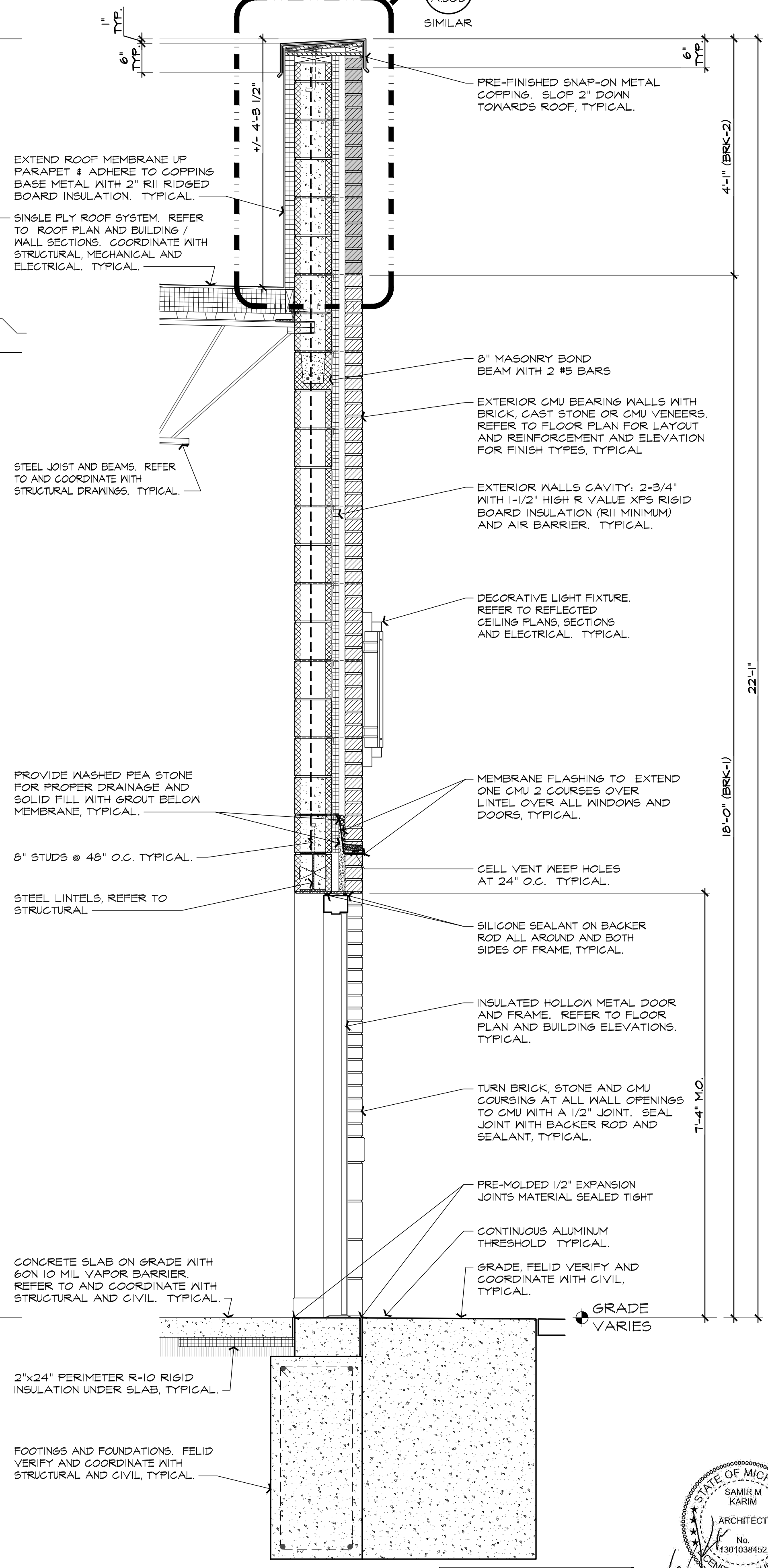
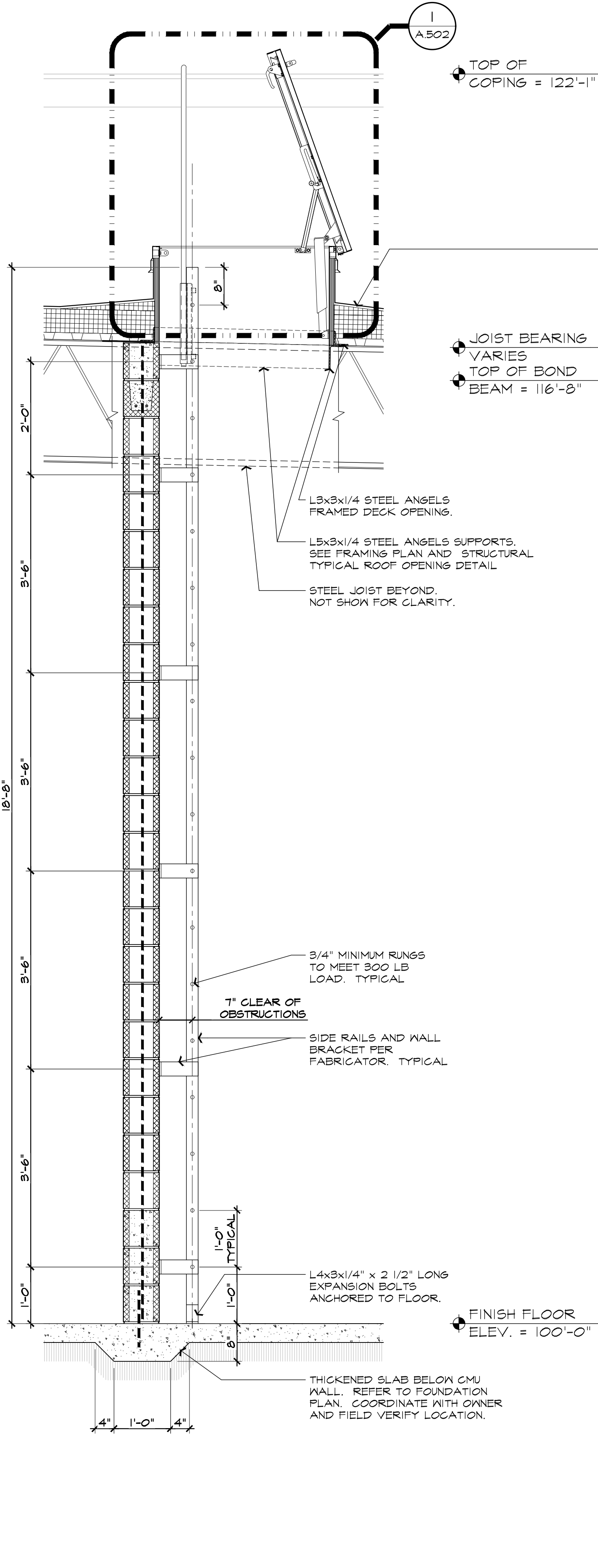
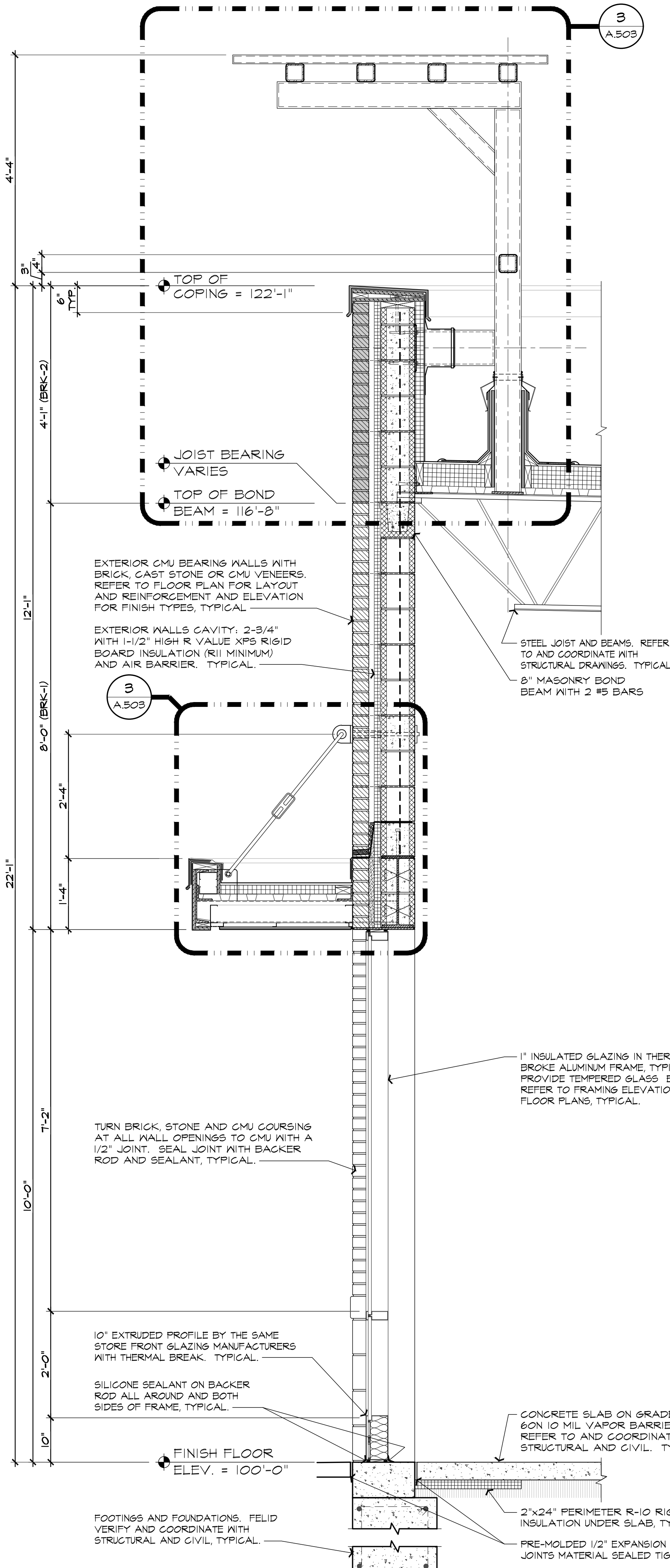
NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
	SA	SA
SCALE :		
FILE NAME : 21096_A402		
JOB # : 21096		
SHEET TITLE		
WALL SECTIONS		
SHEET #		
A.402		



WHERE ITEMS ARE NOTED AND / OR DIMENSIONED ON ONE SECTION / DETAIL ARE APPLICABLE TO OTHER SECTIONS / DETAILS ON THIS SHEET.

GUARD RAILS AT ROOF ACCESS HATCH. FIELD VERIFY PARAPET HEIGHT IS A MINIMUM 3'-6" ABOVE ROOF SURFACE. NOTIFY ARCHITECT IF HEIGHT IS LESS THAN 3'-6".

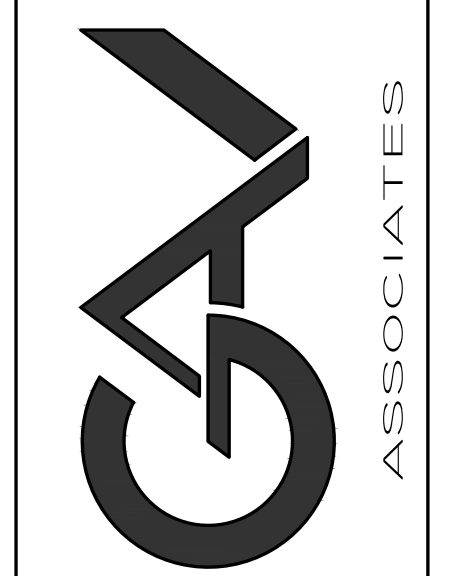




ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
 RESIDENTIAL  
 COMMERCIAL  
 INDUSTRIAL

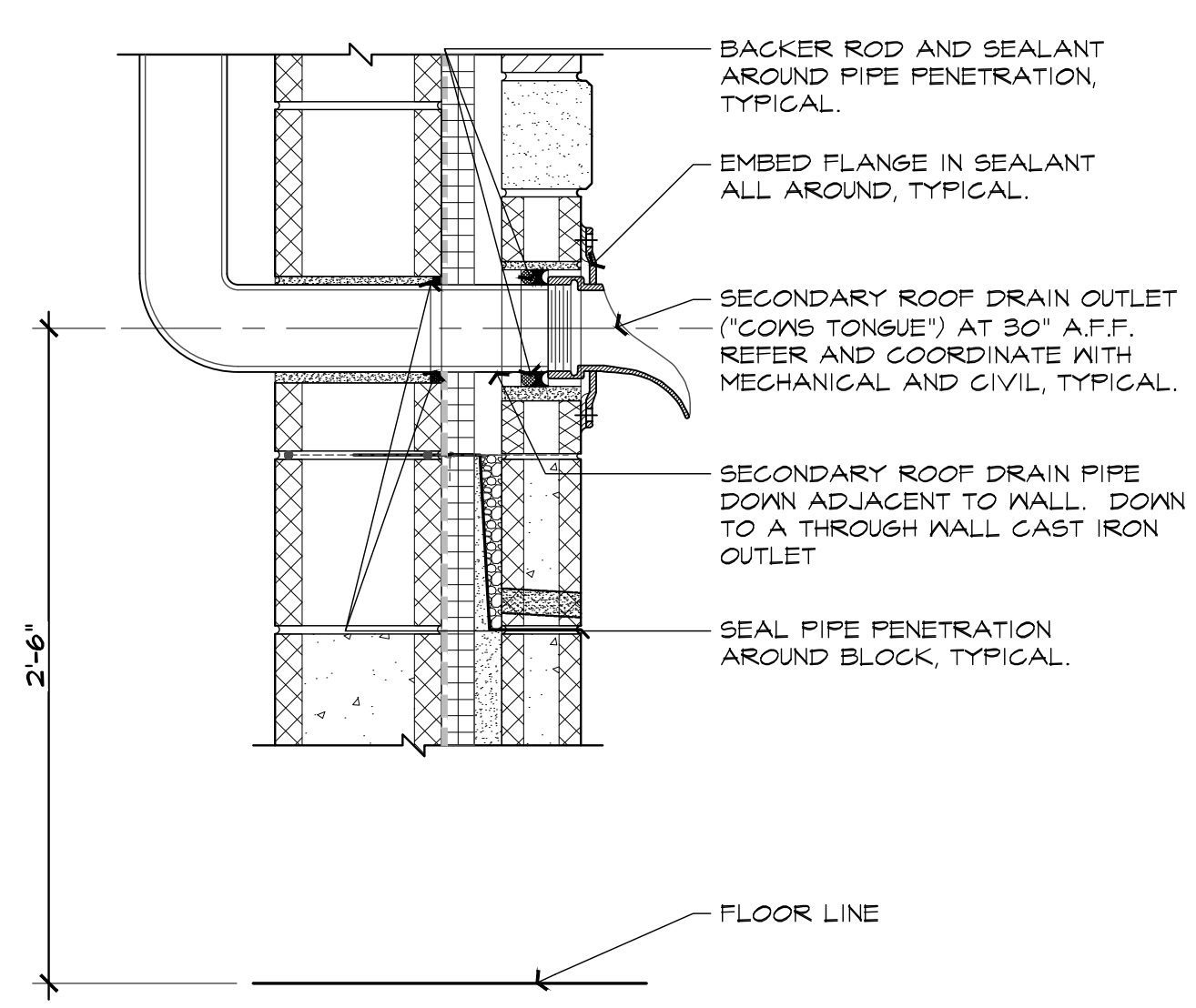
G.A.V. ASSOCIATES, INC.  
 24051 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9191  
 WEB: WWW.GAVASSOCIATES.COM



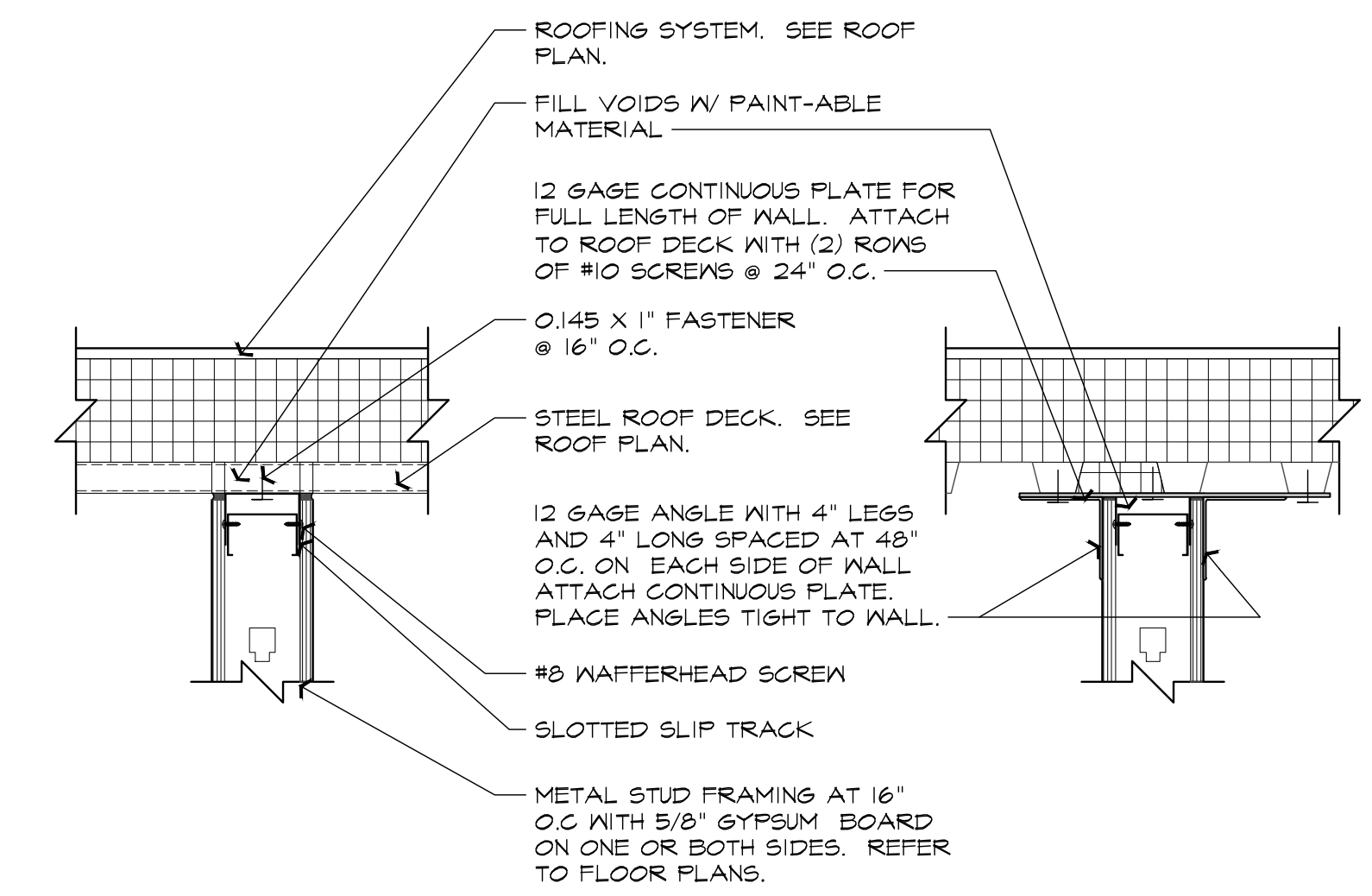
4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

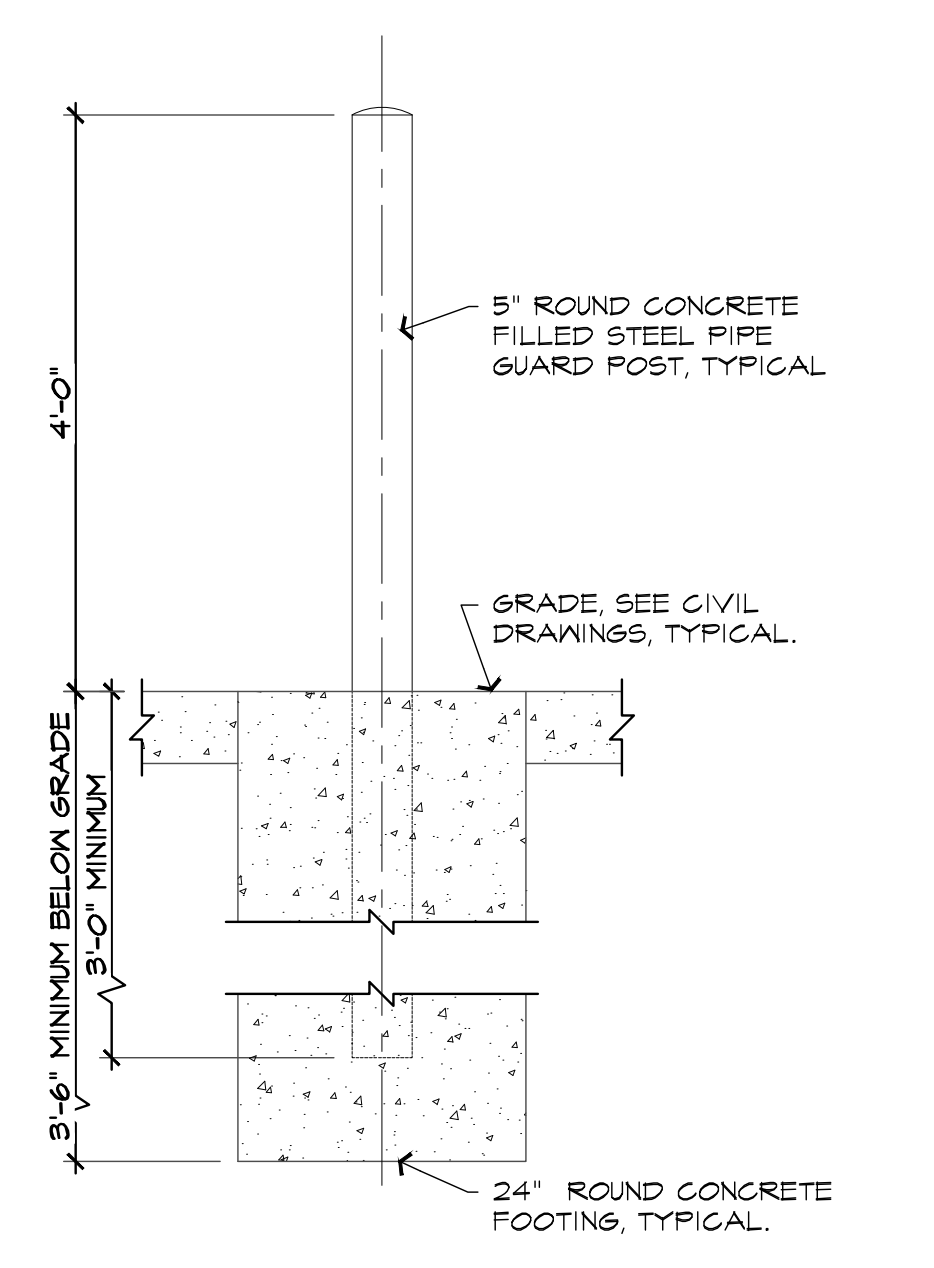
DRAWN:	DESIGNED:	CHECKED:
	SA	SA
SCALE :		
FILE NAME : 21096_A502		
JOB # : 21096		
SHEET TITLE		
DETAILS		
SHEET #		
A.502		



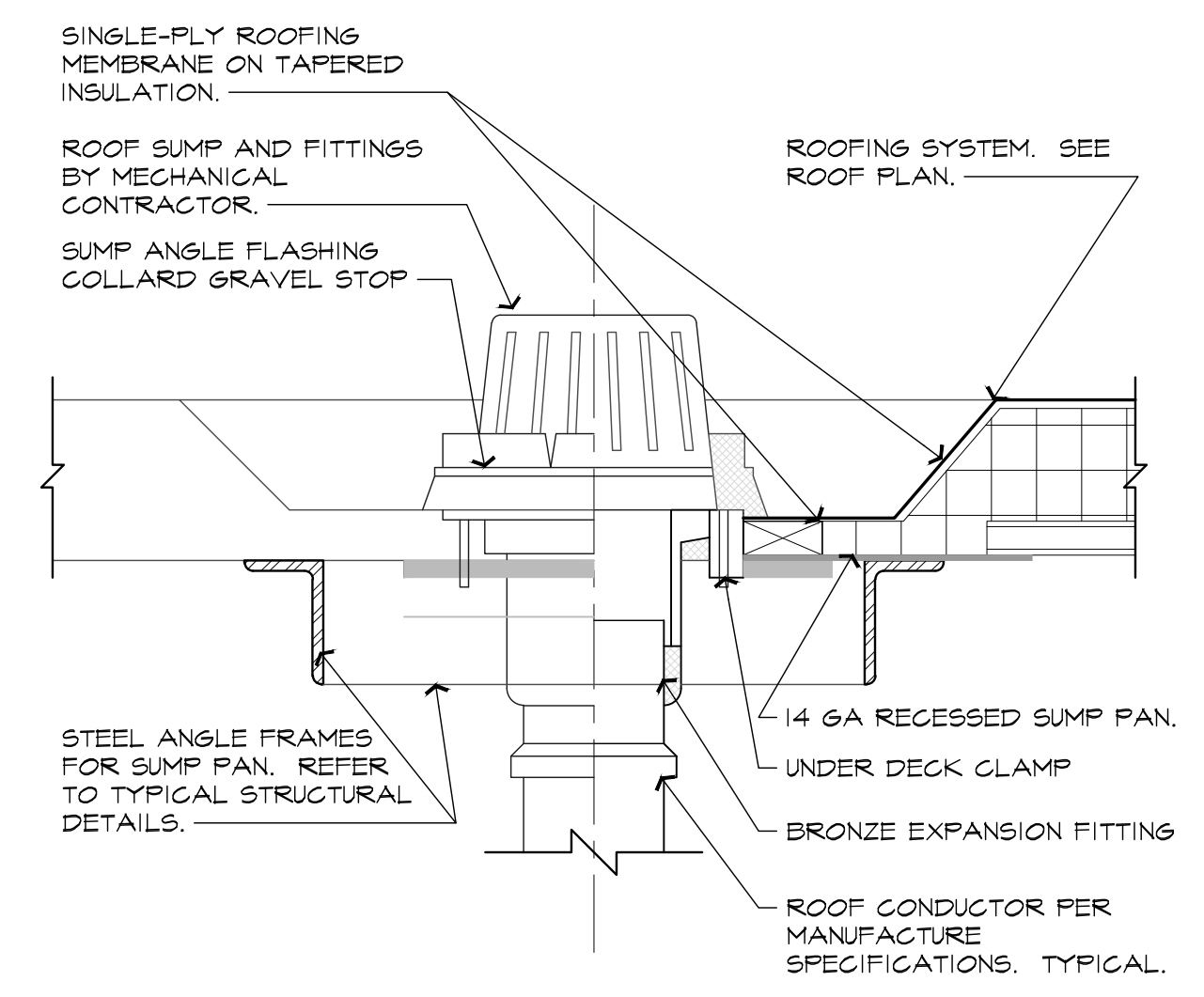
**5 SECTION**  
 A.405 SCALE: 1 1/2" = 1'-0"



**4 TYPICAL DEFLECTION TRACK DETAIL**  
 A.501 NOT TO SCALE

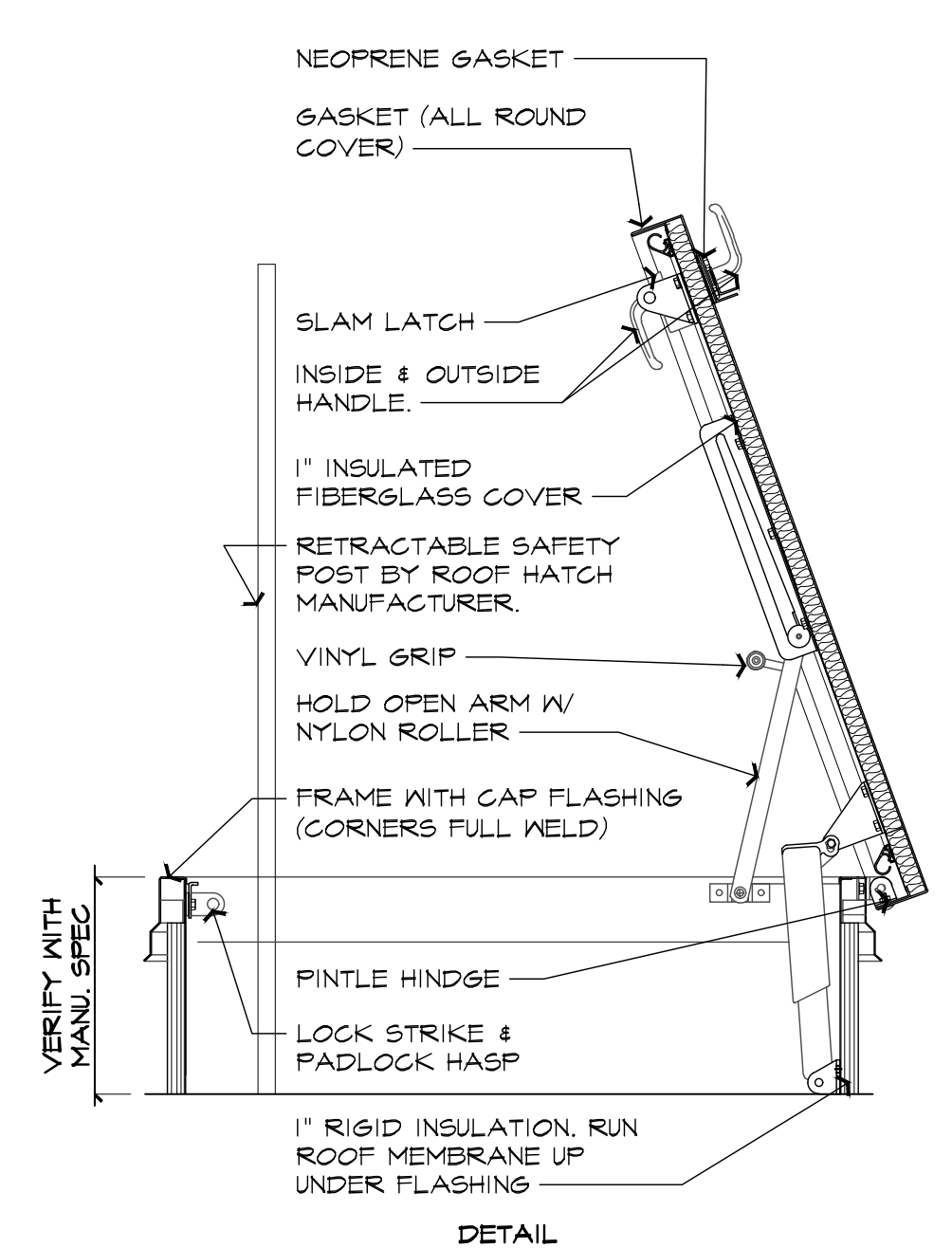


**3 TYPICAL BOLLARD DETAIL**  
 A.501 NOT TO SCALE



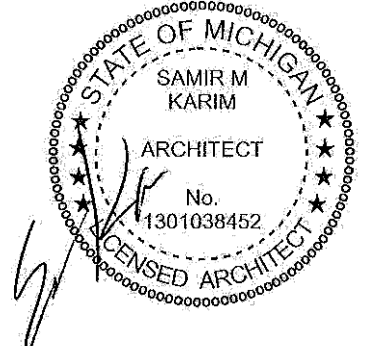
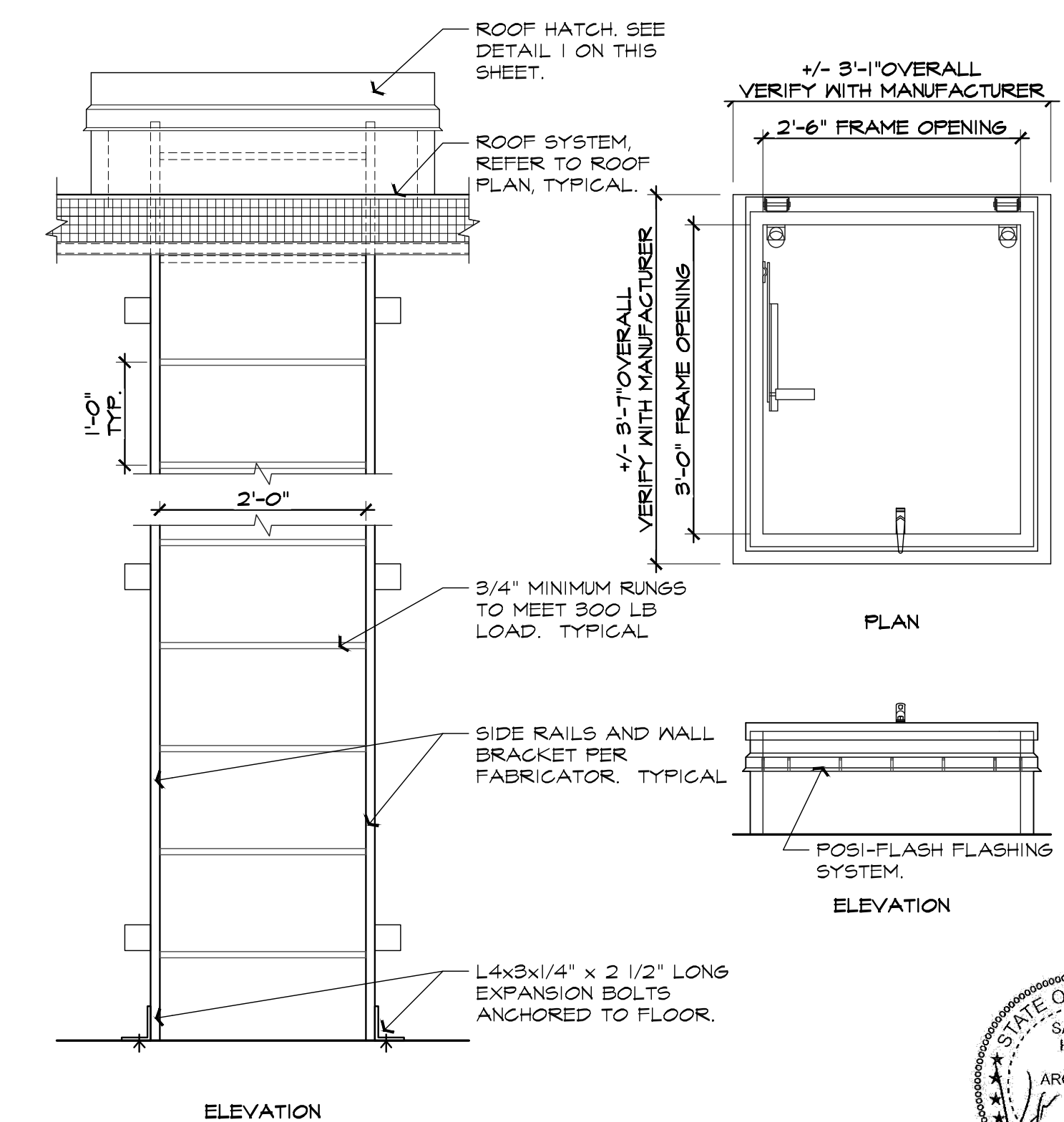
**2 TYPICAL PRIMARY AND SECONDARY ROOF DRAIN DETAIL**  
 A.501 NOT TO SCALE

- G.C. / C.M. TO COORDINATE WITH MECHANICAL ALL REQUIREMENTS TO ENSURE PROPER WATERTIGHT INSTALLATION.
- REFER TO ROOF PLAN AND MECHANICAL FOR PRODUCT TYPE AND.



- PROVIDE BILCO TYPE-S ROOF SCUTTLE (OR APPROVED EQUAL BY OWNER).
- SEE WALL SECTION NO. 2 ON SHEET A.405.

**1 ROOF HATCH DETAIL**  
 A.102 SCALE: 3/4" = 1'-0"



ISSUED FOR	Item D.
PERMITS	10/22/2021

**ARCHITECTURAL DESIGN**  
**RESIDENTIAL COMMERCIAL INDUSTRIAL**  
 G.A.V. ASSOCIATES, INC.  
 24051 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9191  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
	SA	SA

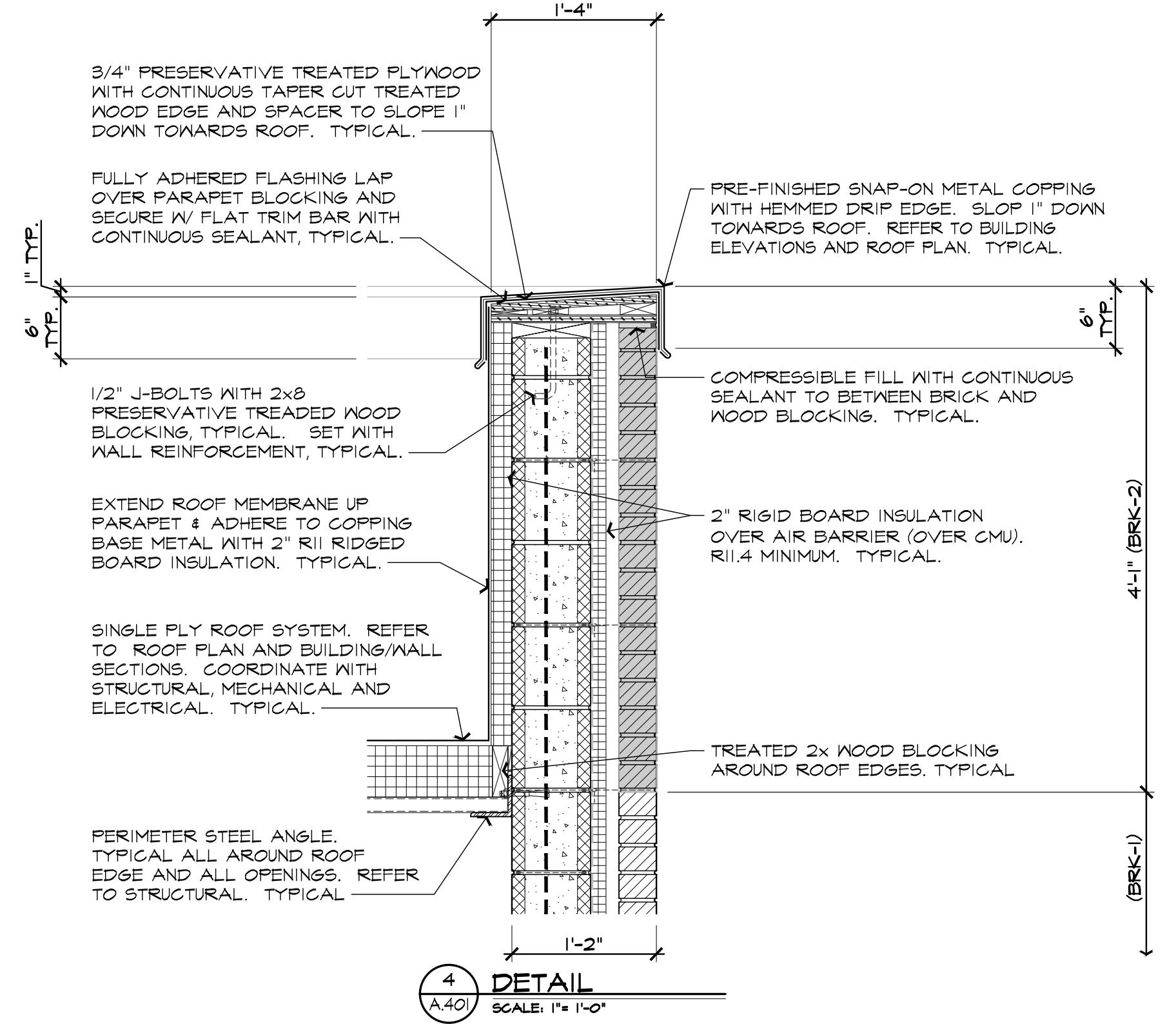
SCALE :

FILE NAME : 210A6\_A503

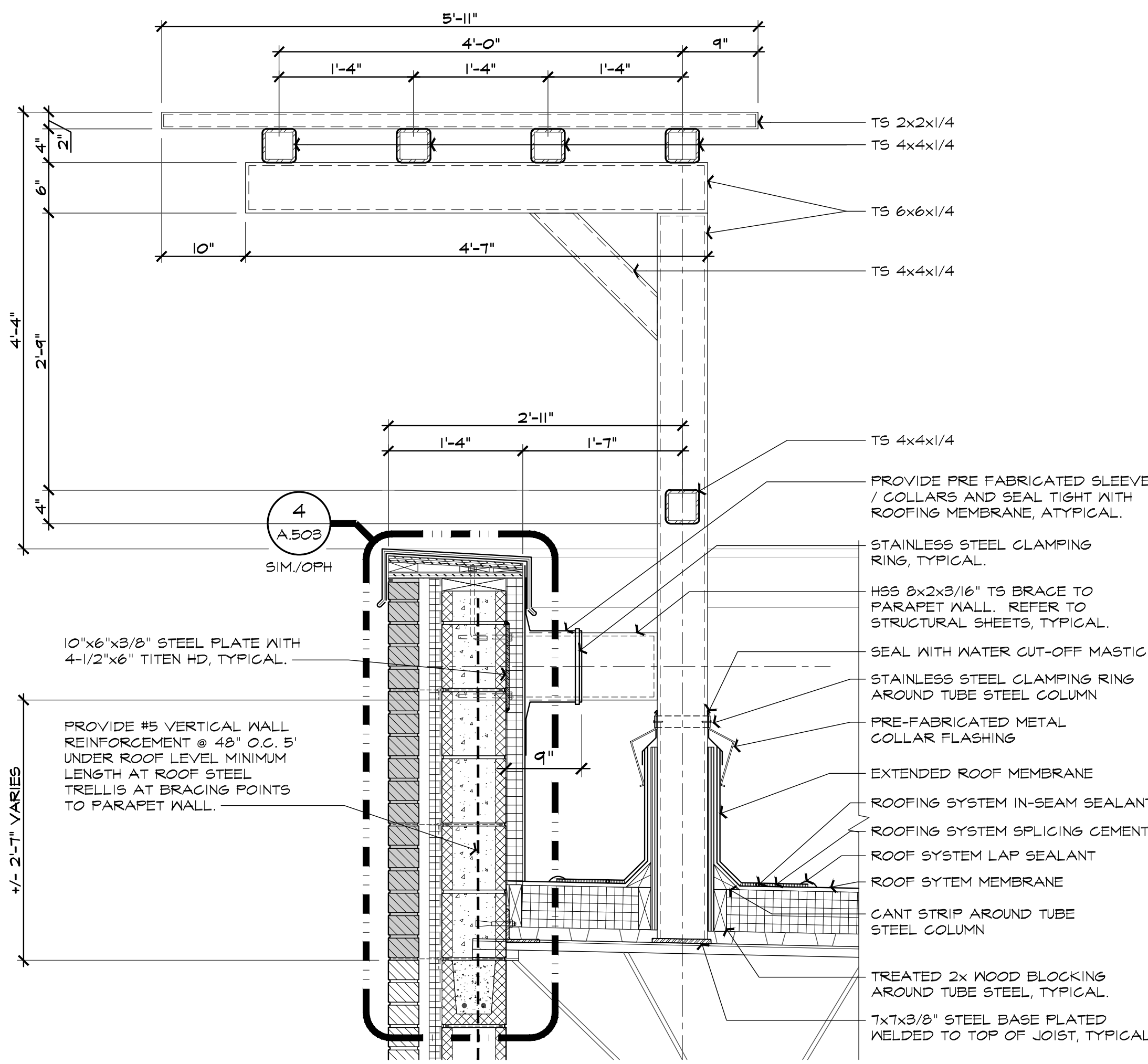
JOB # : 210A6

SHEET TITLE  
 DETAILS

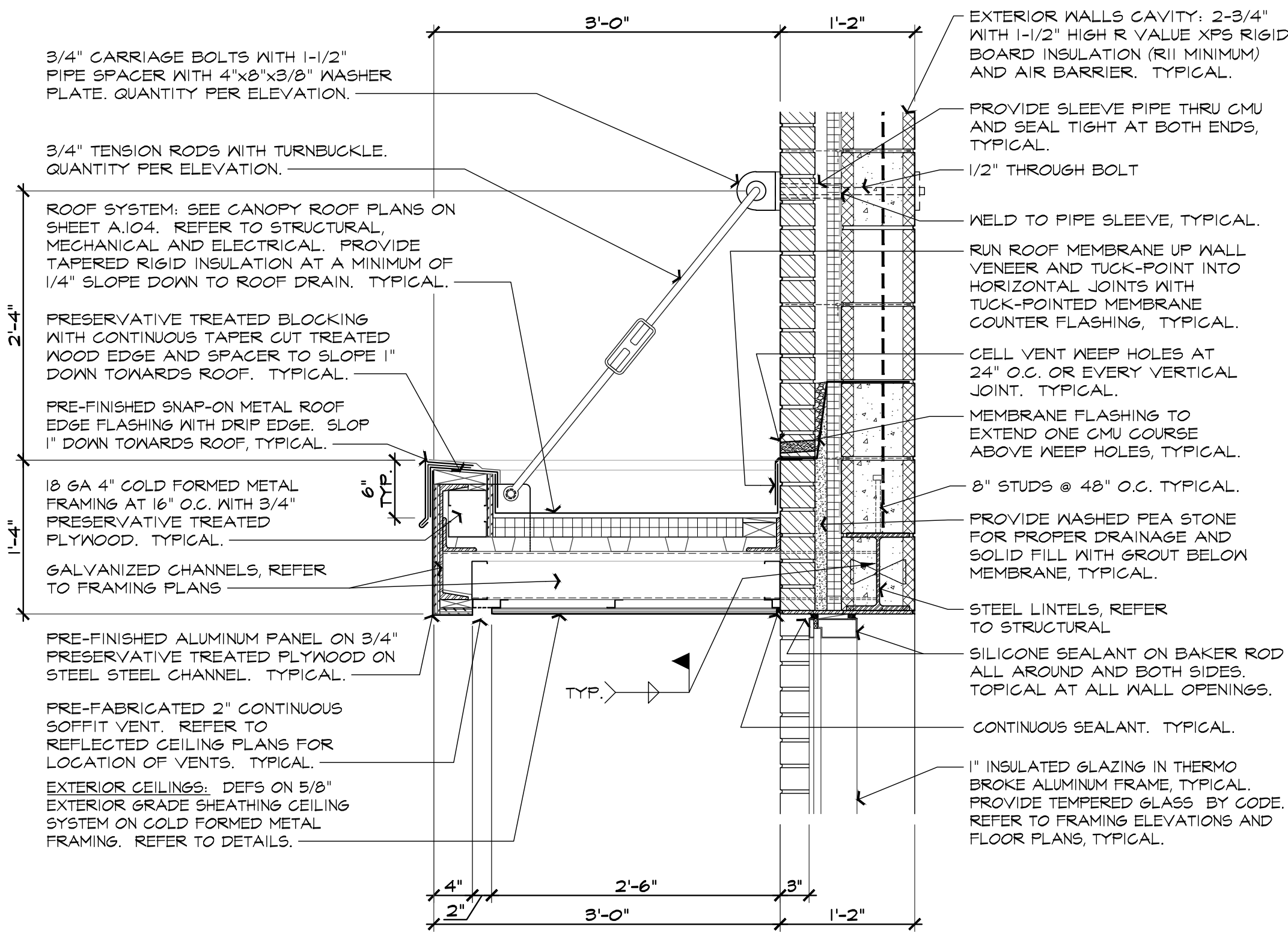
SHEET #  
**A.503**



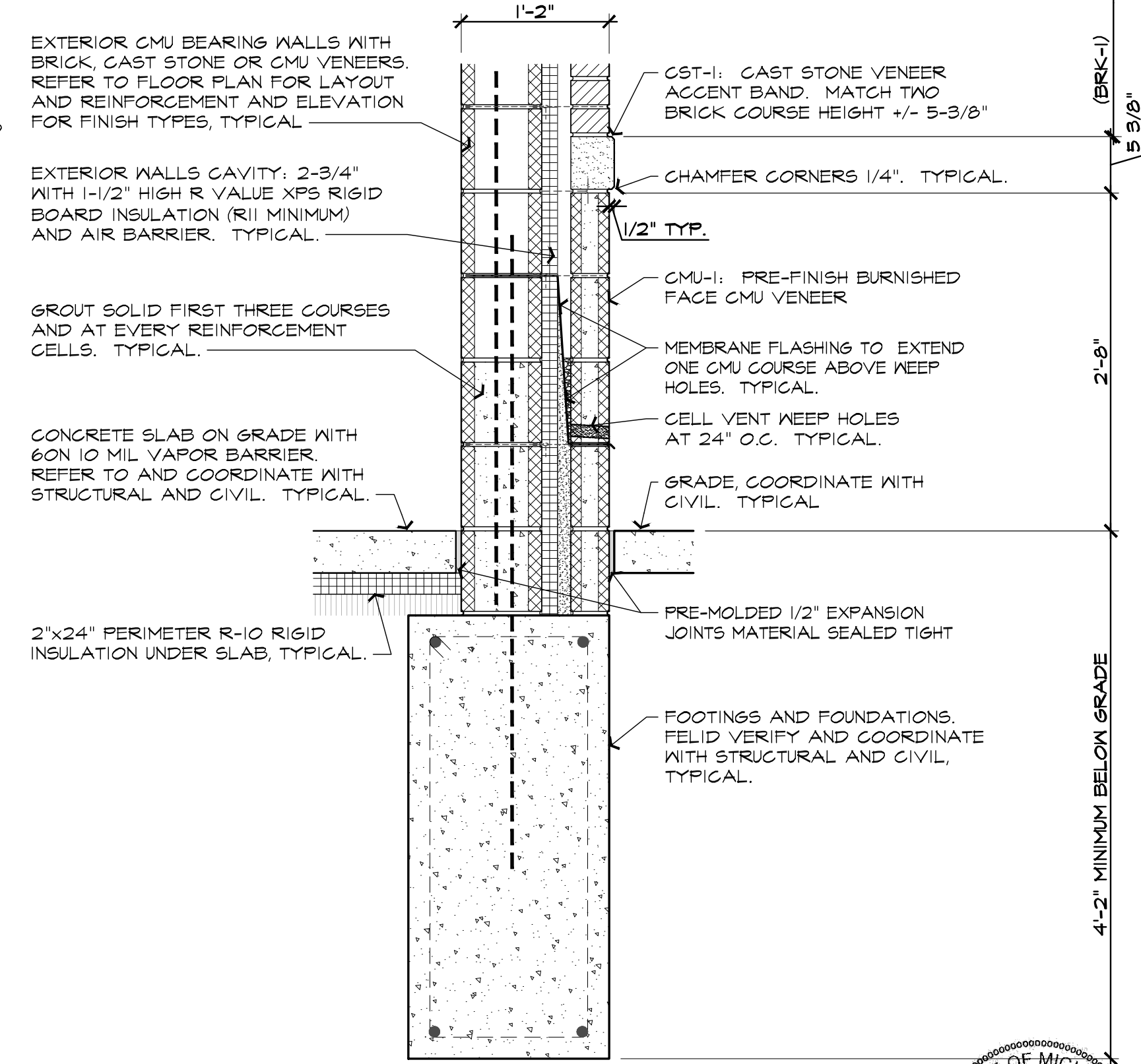
**4** DETAIL  
 SCALE: 1" = 1'-0"



**3** DETAIL  
 SCALE: 1" = 1'-0"

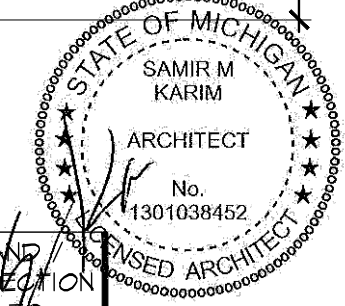


**2** DETAIL  
 SCALE: 1" = 1'-0"



**1** DETAIL  
 SCALE: 1" = 1'-0"

WHERE ITEMS ARE NOTED AND/OR DIMENSIONED ON ONE SECTION / DETAIL ARE APPLICABLE TO OTHER SECTIONS / DETAILS ON THIS SHEET.



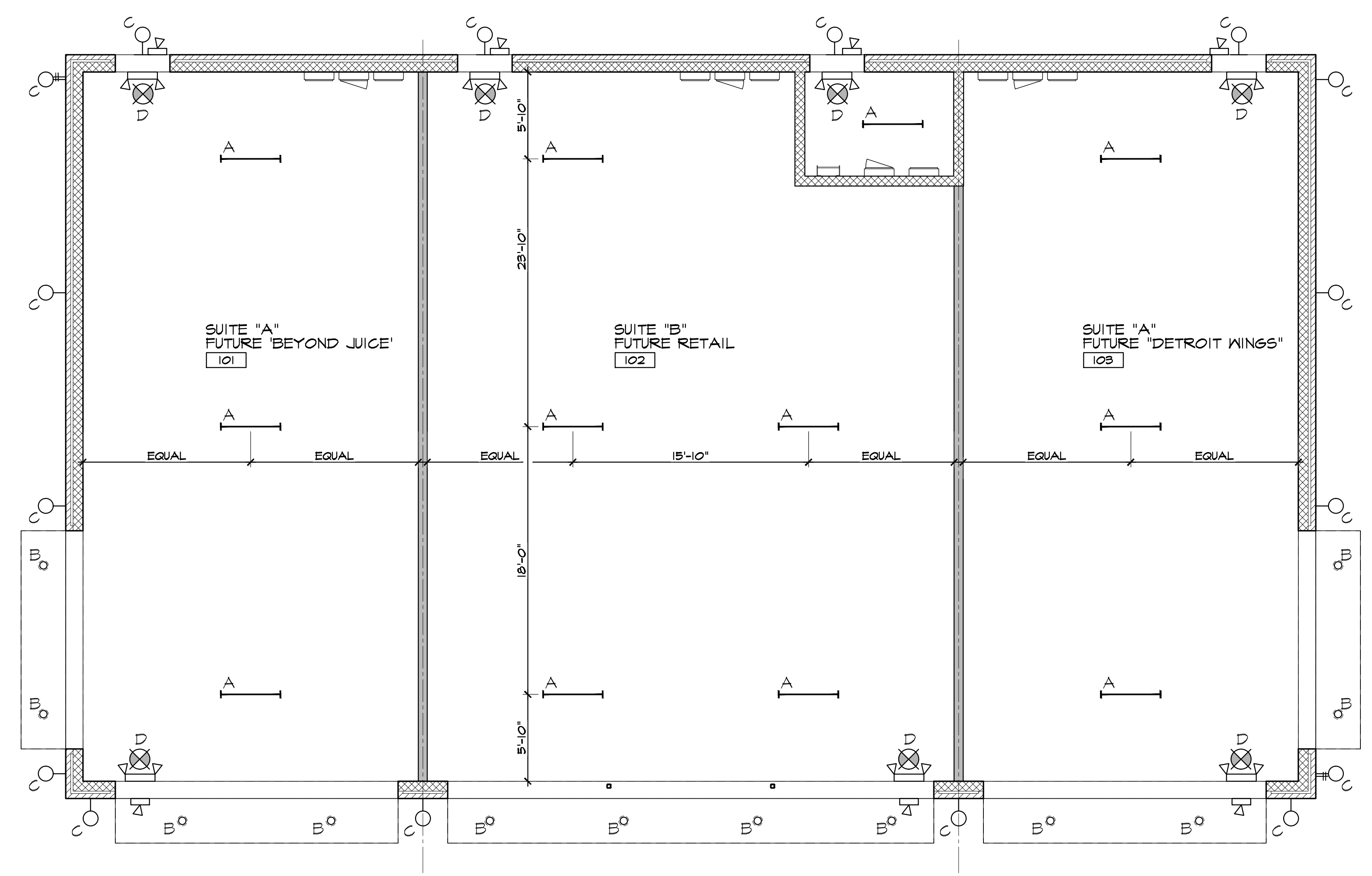
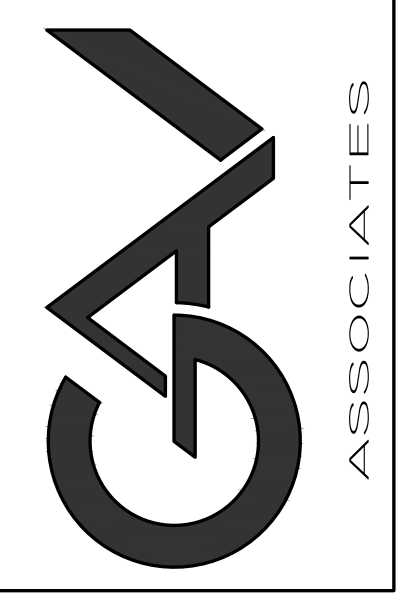
**REFLECTED CEILING PLAN LEGEND:**

- A — 4' LONG CEILING SUSPENDED LED LIGHT FIXTURE  
MODEL: LAMAR LIGHTING DLLR SERIES
  - B ○ ROUND CEILING RECESSED EXTERIOR LED LIGHT FIXTURE
  - C ○ EXTERIOR WALL MOUNTED DECORATIVE LIGHT FIXTURE MODEL:  
674-31-WP SERIES BY COOPER LIGHTING. SIZE 31" IN CG  
COLOR (CUSTOM COLOR) WITH LED LAMPS.
  - D □ POLYCARBONATE EXIT UNIT COMBO LIGHTING FIXTURE W/INCAD  
BATTERY FOR 90 MINUTES MAINTENANCE FREE IV  
SELF-DIAGNOSTIC.
- NOTE: COORDINATE ALL LIGHT FIXTURE SELECTIONS AND COLORS WITH  
OWNER FOR APPROVALS. TYPICAL FOR ALL FIXTURES.

ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL

G.A.V. ASSOCIATES, INC  
24051 ORCHARD LAKE RD., STE. 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9191  
WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
UNION LAKE & COOLEY LAKE ROADS  
COOLEY LAKE ROAD  
WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
SSA	GA	GA

SCALE :

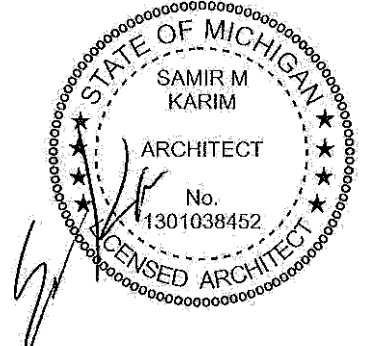
FILE NAME : 21096\_A601

JOB # : 21096

SHEET TITLE  
REFLECTED  
CEILING PLAN

SHEET #  
A.60

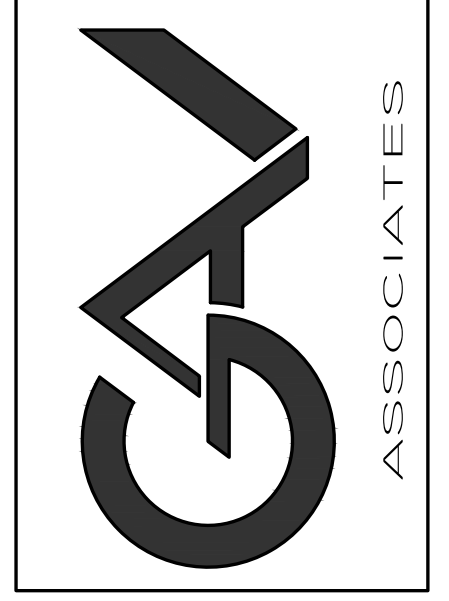
**REFLECTED CEILING PLAN**  
SCALE: 3/16" = 1'-0"





ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
**RESIDENTIAL COMMERCIAL INDUSTRIAL**  
 G.A.V. ASSOCIATES, INC.  
 24051 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9191  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
SSA	GA	GA
SCALE :		
FILE NAME : 21096_S101		
JOB # : 21096		
SHEET TITLE		
FOUNDATION PLAN		
SHEET #		
S.101		

- FOUNDATIONS NOTES:**
- REFER TO SPECIAL INSPECTIONS NOTES ON SHEET T.002.
  - OVERLAP BAR REINFORCEMENT A MINIMUM OF 3'-0" AT ALL FOOTING CORNERS, UNO.
  - ALL WALL FOOTINGS ARE BASED ON 2,000 LB/FT<sup>2</sup>
  - COORDINATE WITH UNDERGROUND PLUMBING AND CIVIL.
  - BOTTOM OF EXTERIOR FOOTINGS / FOUNDATIONS SHALL BE A MINIMUM OF 42" BELOW GRADE.
  - COORDINATE ROOF CONDUCTORS WITH PLUMBING, ROOFING AND CONCRETE FOUNDATION CONTRACTORS.
  - PROVIDE MASS POUR FROST FOOTINGS AT ALL ENTRY DOORS.
  - REFER TO GROUND FRAMING PLAN FOR COLUMNS AND BASE PLATES LOCATIONS.

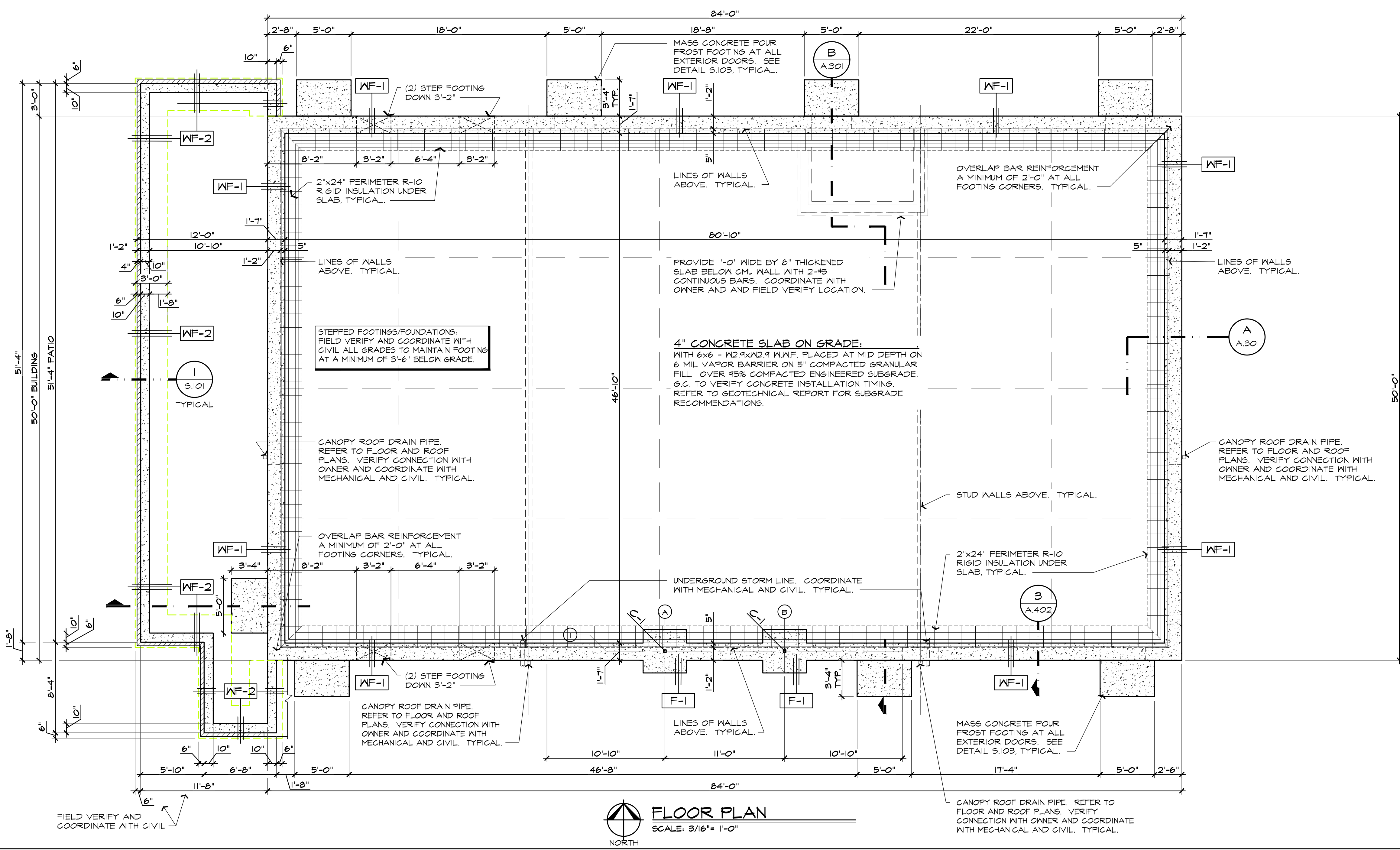
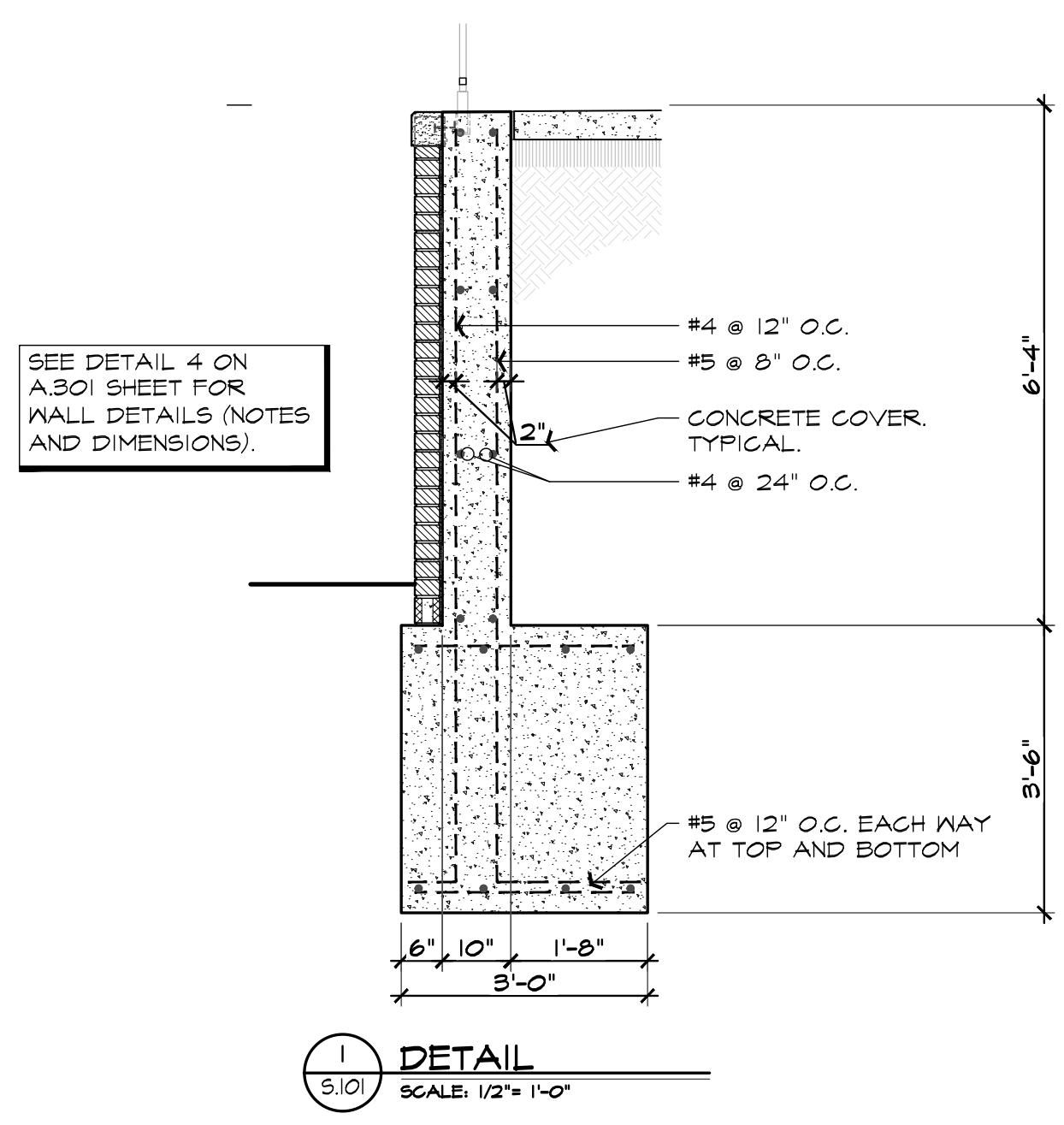
**WALL FOOTINGS SCHEDULE:**

MARK	SIZE (WxD)	REINFORCEMENT U.NO.
WF-1	1'-6"x3'-6"	2 #5 CONTINUOUS @ TOP AND BOTTOM
WF-2	SEE DETAIL	SEE DETAIL

PROVIDE #5 BARS @ 48" O.C. DOWELS FOR ALL WALL FOOTINGS. BARS SHALL BE 2'-0" INTO FOOTING AND 3'-0" ABOVE.

**COLUMN FOOTINGS SCHEDULE:**

MARK	SIZE (WxD)	DEPTH	REINFORCEMENT U.NO.
F-1	4'-0"x4'-0"	3'-6"	#5 @ 6" O.C. EACH WAY AT BOTTOM AND #4 @ 12" O.C. EACH WAY AT TOP





**GENERAL NOTES:**

REFER TO SHEET S.102 FOR SCHEDULES AND NOTES.

**ROOF STEEL TRELLIS FRAMING NOTES:**

- ALL EXPOSED STEEL TO RECEIVE SPECIAL PRIMER. SOLVENT BASED TWO PART INORGANIC ETHYL SILICATE ZINC RICH PRIMER.
- SPECIAL PRIMER SHALL BE APPLIED TO ALL ROOF EXPOSED STEEL TRELLIS AND STEEL TOWER. COORDINATE COLOR AND FINISH WITH OWNER AND FINISH PRIME TO ACCEPT PAINT AS REQUESTED BY OWNER.
- SUBMIT A COMPLETE DETAILED SHOP DRAWINGS FOR TRELLIS AND TOWER FOR REVIEW.
- ALL TUBE STEEL MEMBERS TO CAPPED WITH 3/8" WELDED SMOOTH PLATE AT END CAPS.
- WELD CORNERS AND SEAMS CONTINUOUSLY TO COMPLY WITH AISC RECOMMENDATIONS AND THE FOLLOWING:
  - USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.
  - AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO THAT NO ROUGHNESS SHOWS AFTER FINISHING AND CONTOUR OF WELDED SURFACE MATCHES THOSE ADJACENT.
- COORDINATE COLOR / FINISH WITH OWNER.

ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**

RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL

G.A.V. ASSOCIATES, INC.  
24051 ORCHARD LAKE RD., STE. 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9191  
WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
UNION LAKE & COOLEY LAKE ROADS  
COOLEY LAKE ROAD  
WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
SSA	GA	GA

SCALE :

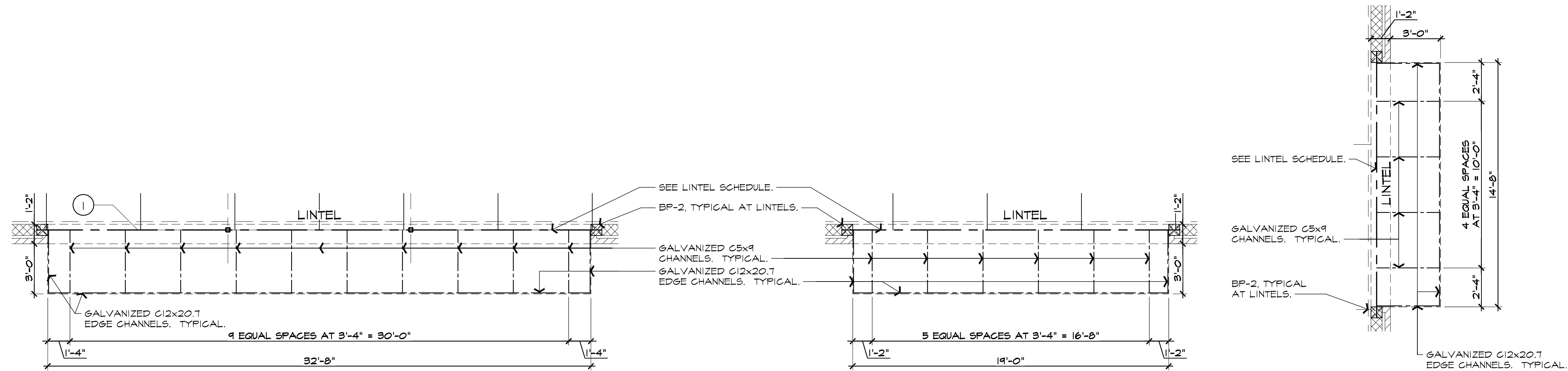
FILE NAME : 21096\_S103

JOB # : 21096

SHEET TITLE

ENLARGED  
FRAMING  
PLANS  
SHEET #

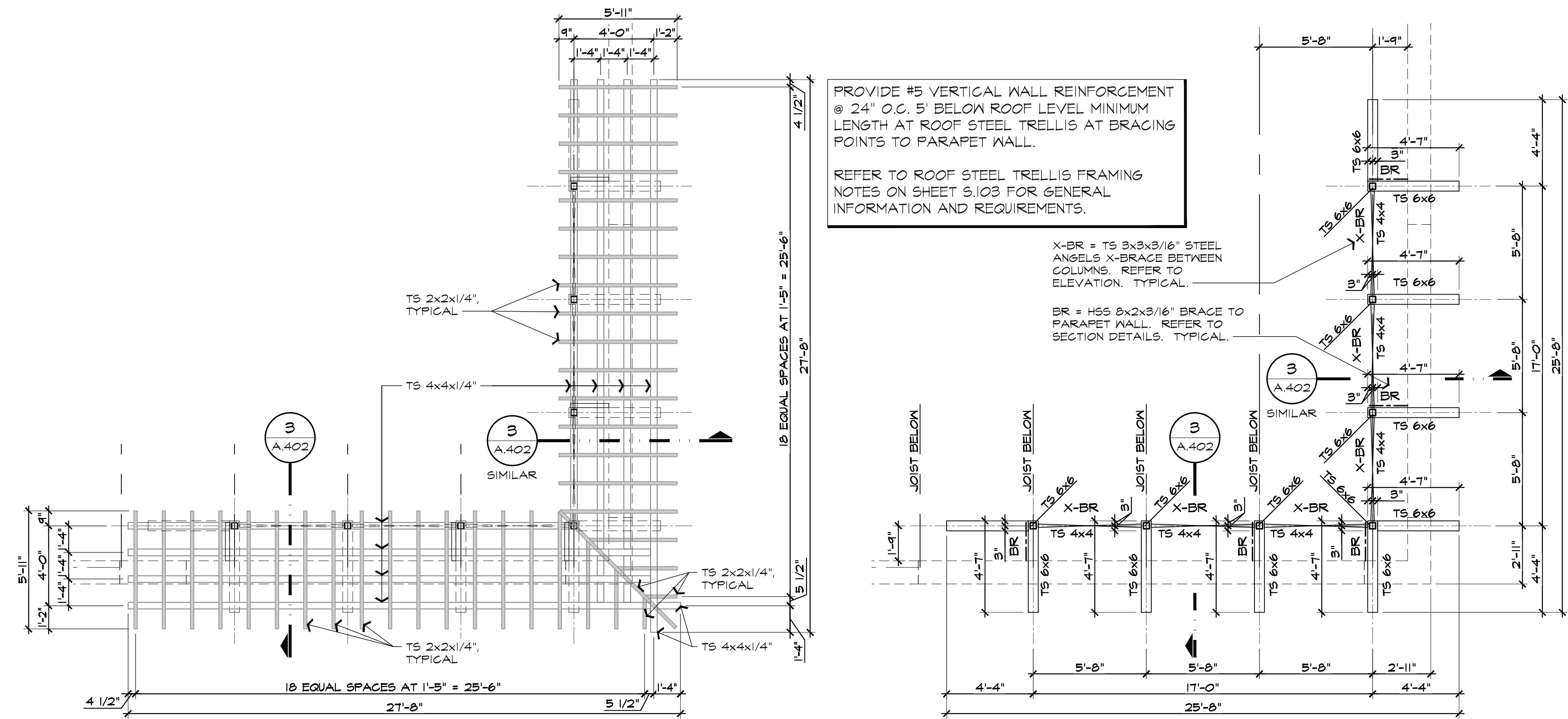
S.103



5 ENLARGED CANOPY FRAMING PLAN  
SCALE: 3/8" = 1'-0"

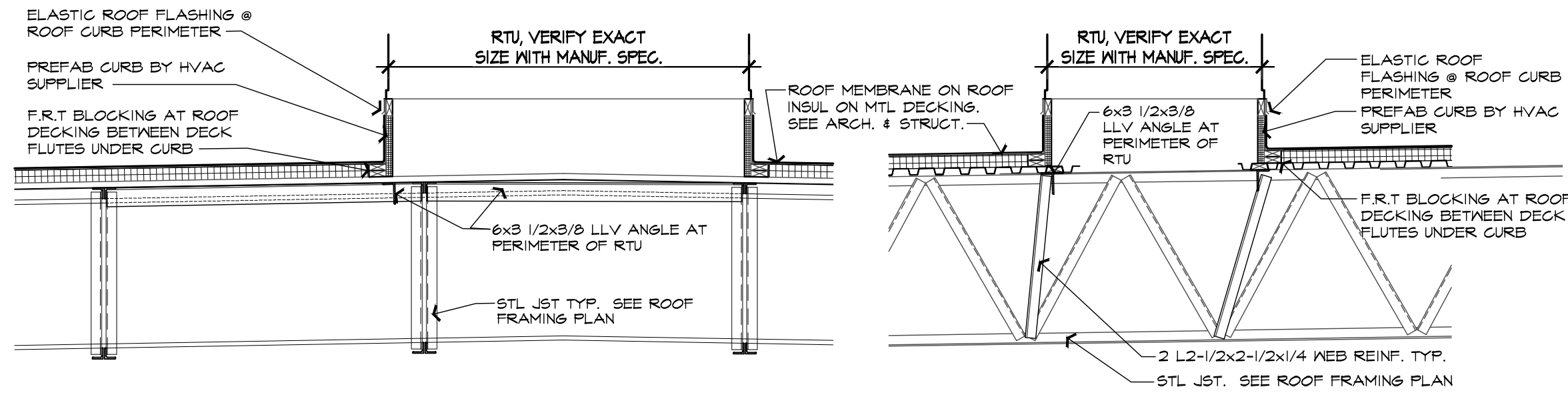
4 ENLARGED CANOPY FRAMING PLAN  
SCALE: 3/8" = 1'-0"

3 ENLARGED CANOPY FRAMING PLAN  
SCALE: 3/8" = 1'-0"



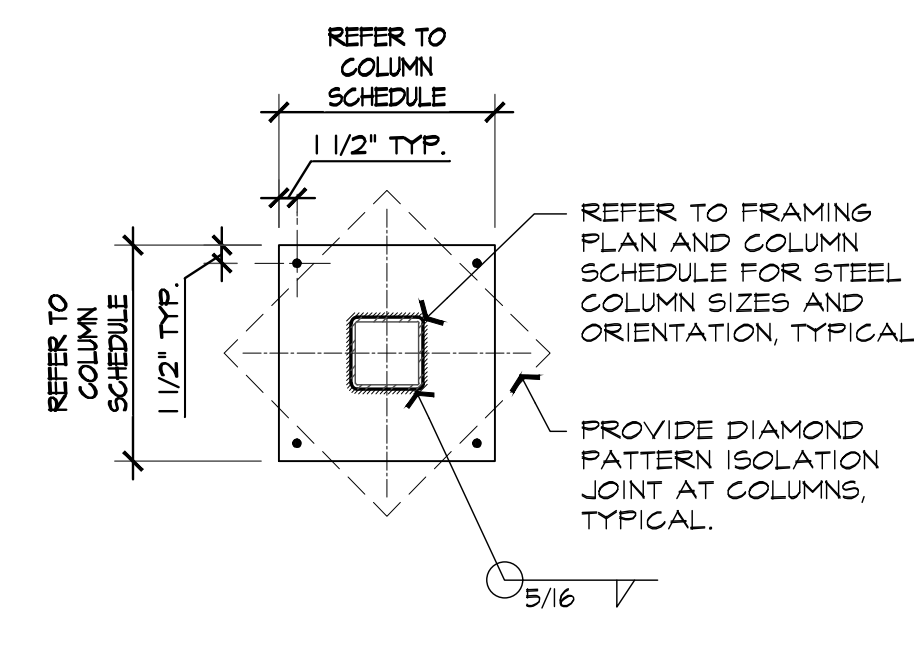
2 ROOF STEEL TRELLIS FRAMING PLAN - HIGH  
SCALE: 3/8" = 1'-0"

1 ROOF STEEL TRELLIS FRAMING PLAN - LOW  
SCALE: 3/8" = 1'-0"

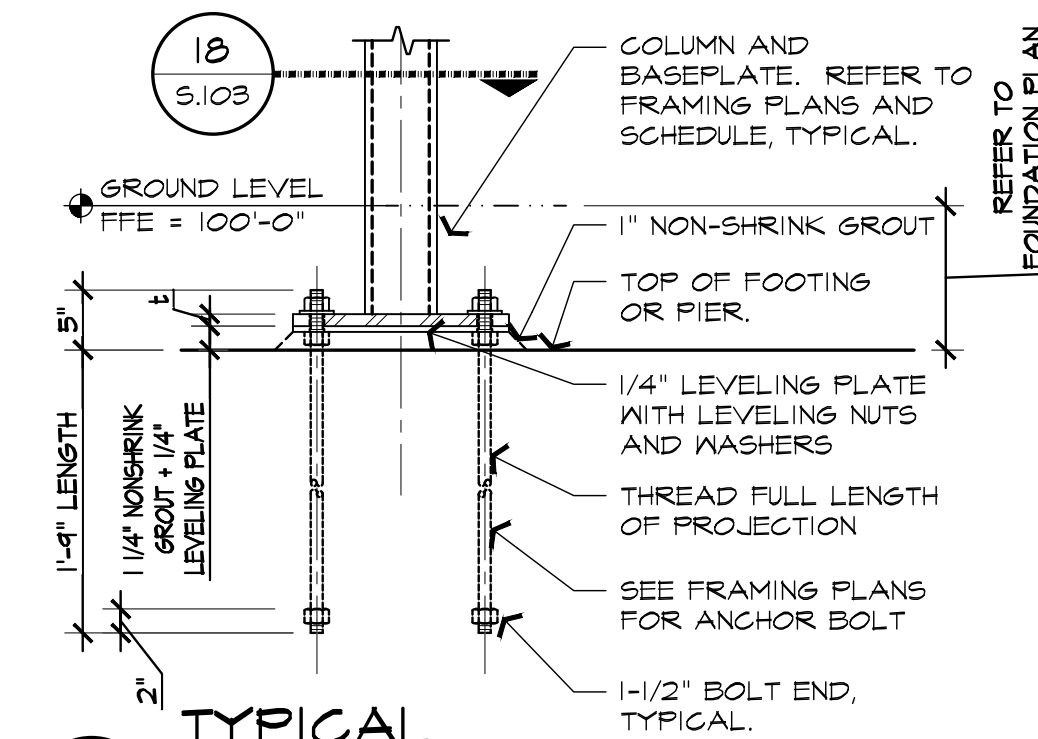


**21**  
5.104  
**TYPICAL ROOFTOP MECH UNIT SUPPORT DETAIL**  
NOT TO SCALE

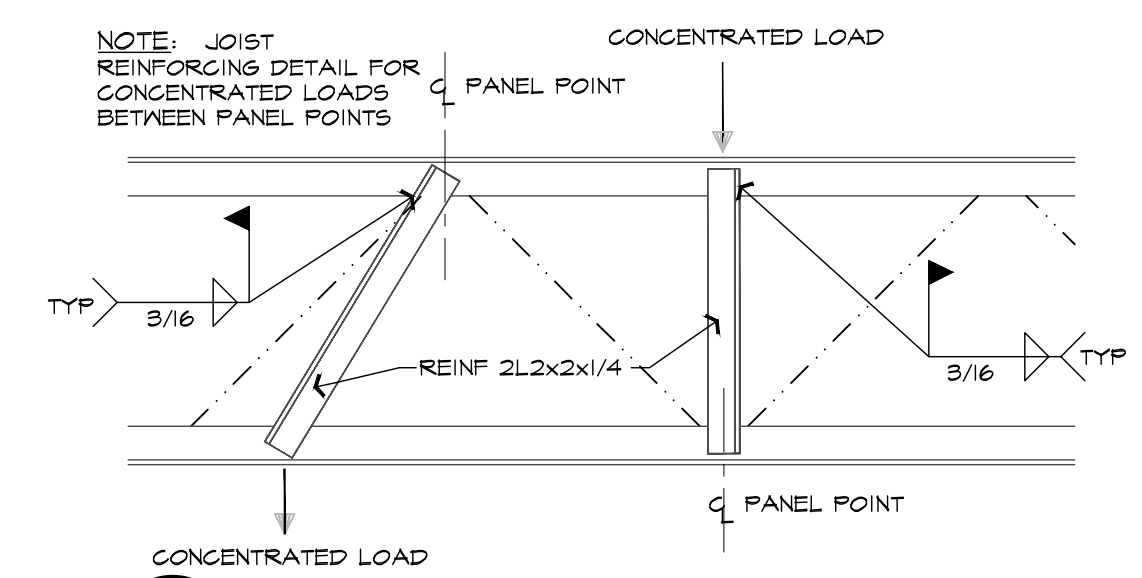
REFER TO FRAMING PLAN AND DETAILS FOR ADDITIONAL REQUIREMENTS THAT ARE NOT DEPICTED ON THESE DETAILS.



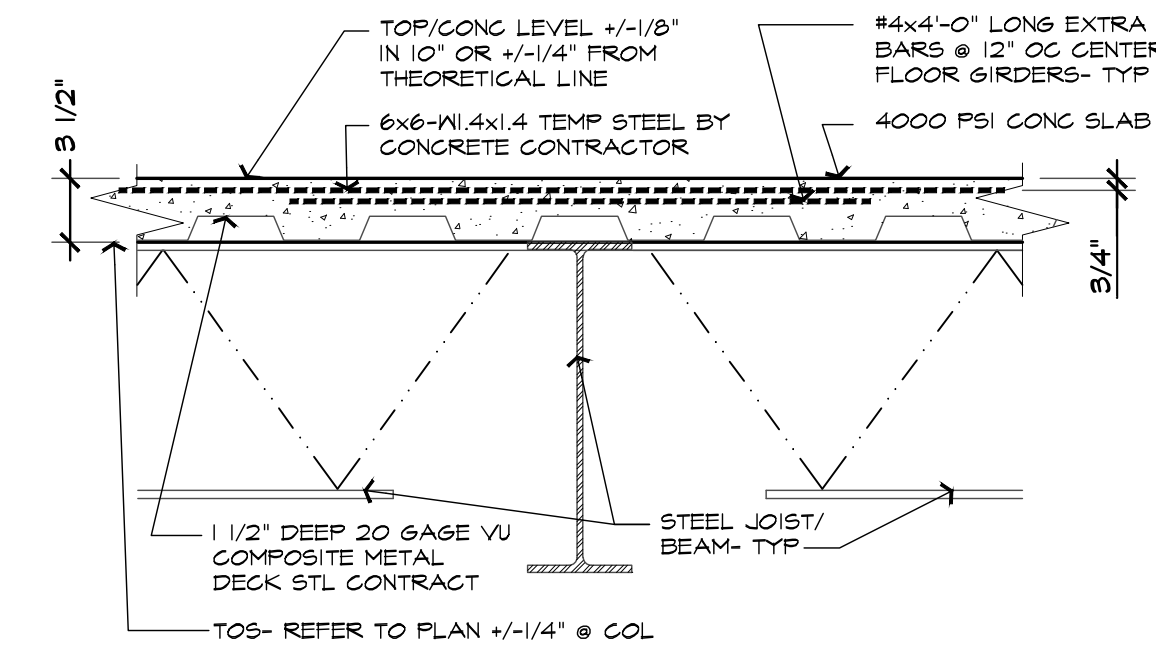
**18**  
5.103  
**TYPICAL BASE PLATE DETAIL**  
NOT TO SCALE



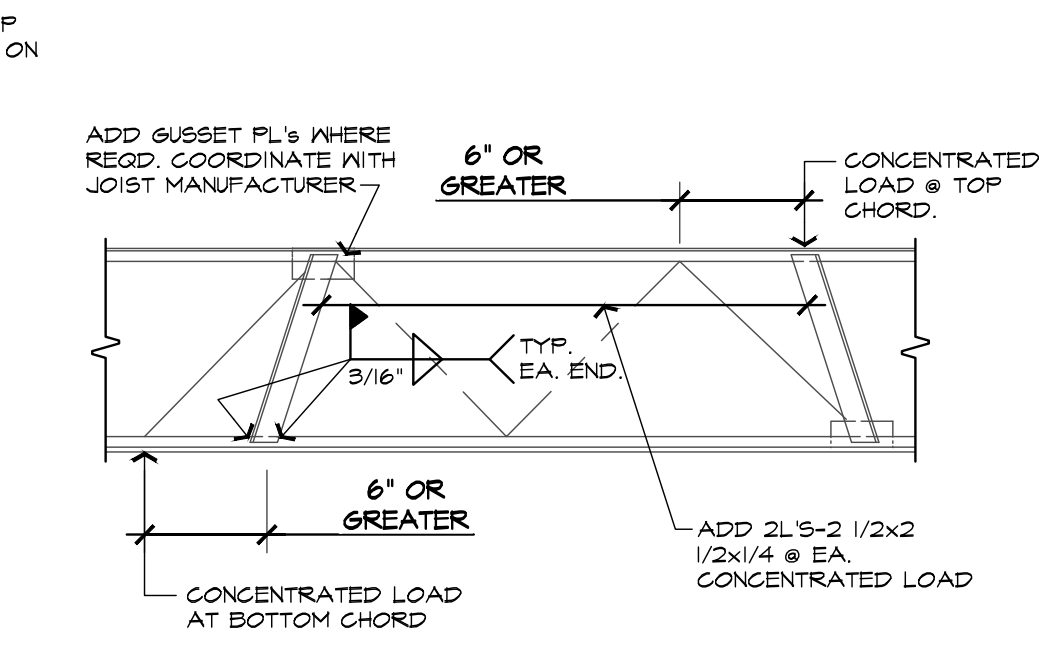
**17**  
5.103  
**TYPICAL BASE PLATE DETAIL**  
NOT TO SCALE



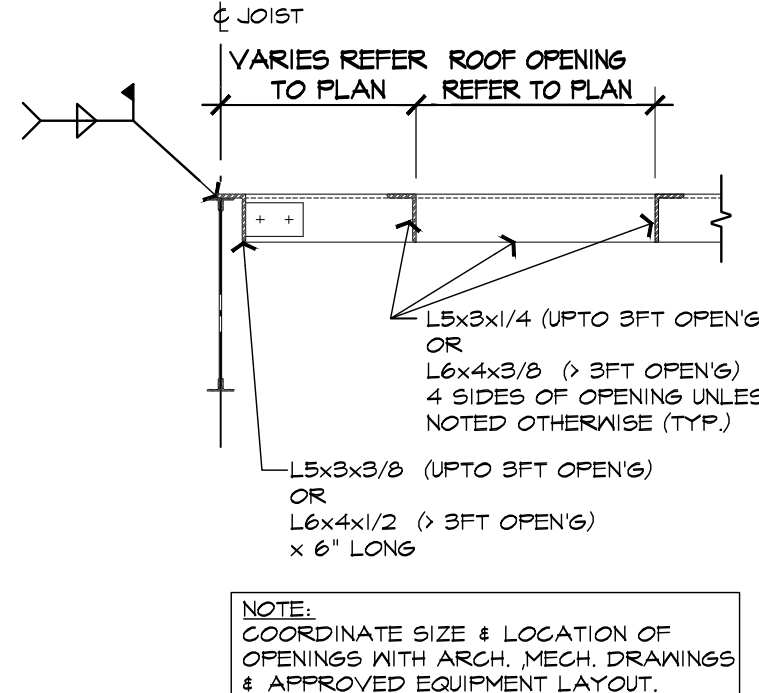
**16**  
5.103  
**TYPICAL DETAIL**  
NOT TO SCALE



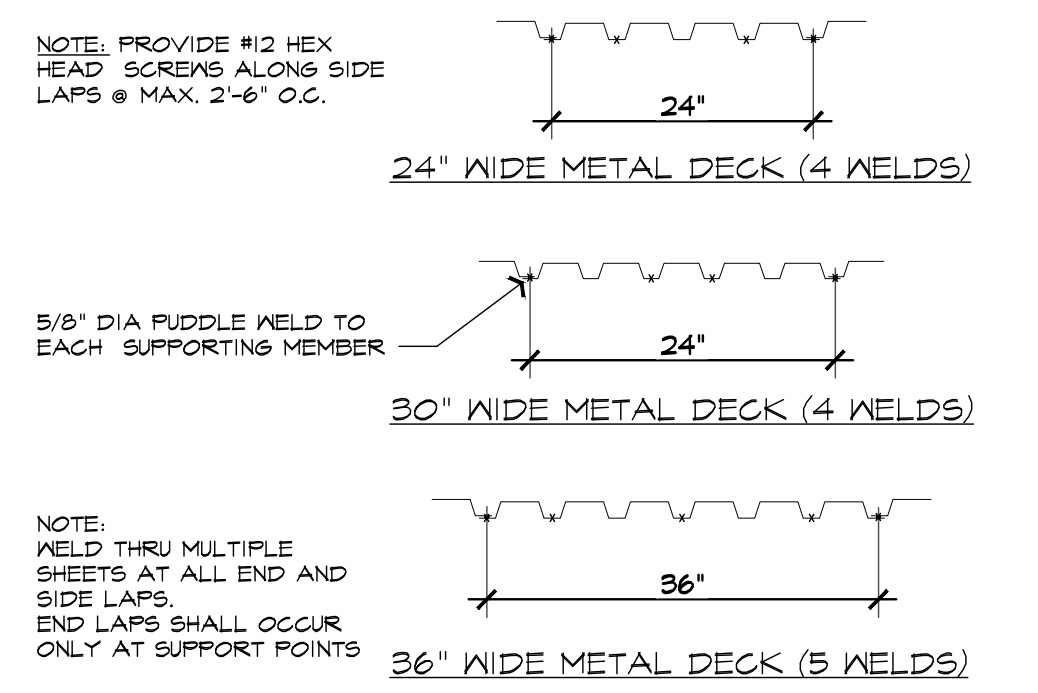
**15**  
5.103  
**TYPICAL SUPPORTED SLAB DETAIL**  
NOT TO SCALE



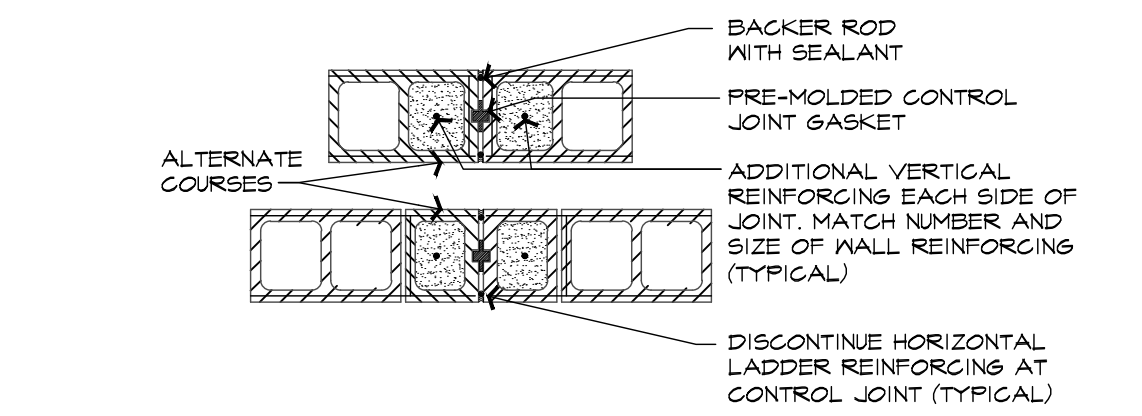
**14**  
5.103  
**TYPICAL JOIST REINFORCING AT CONCENTRATED LOAD**  
NOT TO SCALE



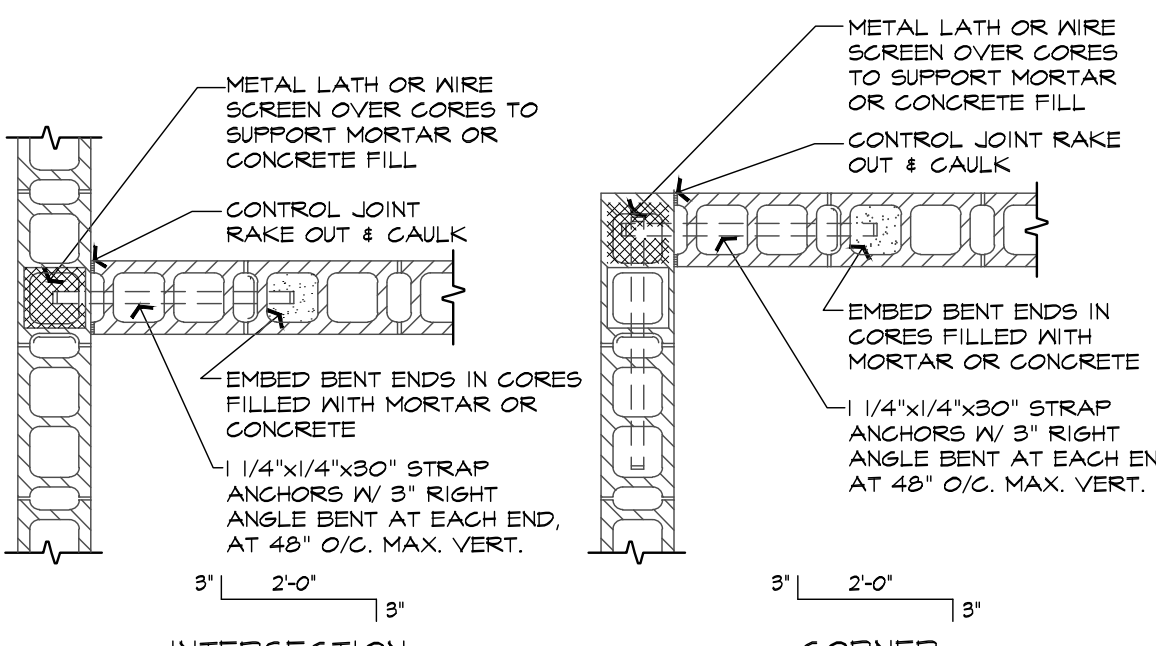
**13**  
5.103  
**TYPICAL ROOF OPENING DETAIL**  
NOT TO SCALE



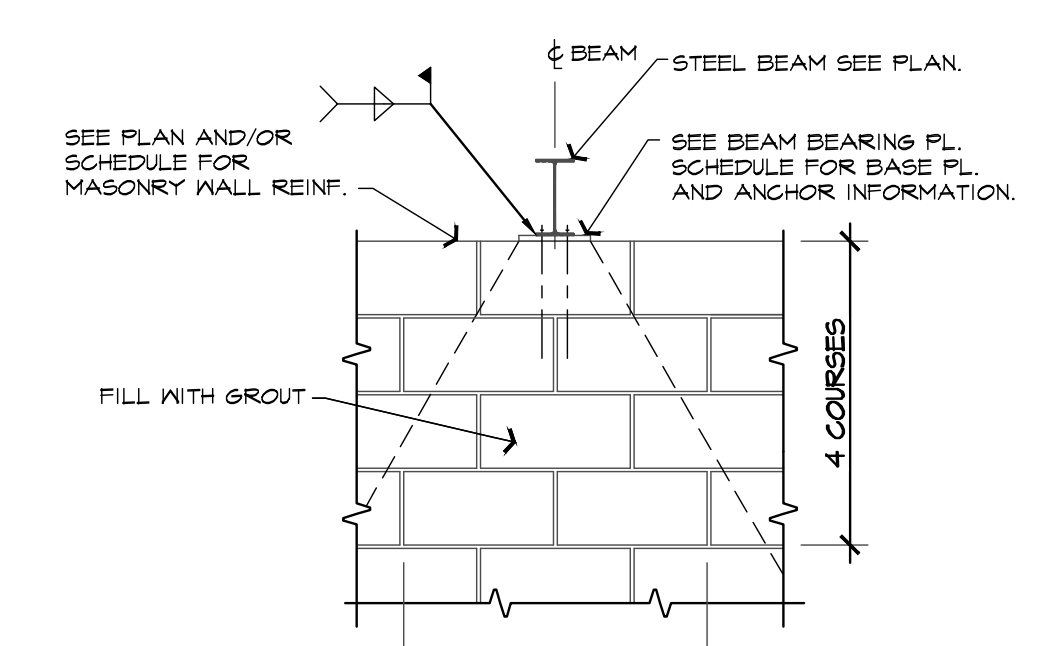
**12**  
5.103  
**METAL ROOF DECK ATTACHMENT DETAIL**  
NOT TO SCALE



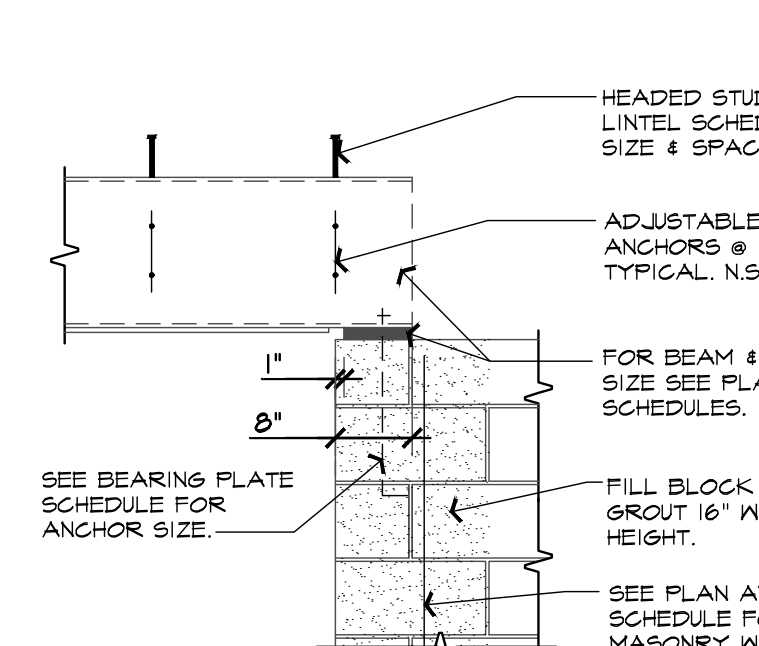
**6**  
5.103  
**TYPICAL MASONRY CONTROL JOINT**  
NOT TO SCALE



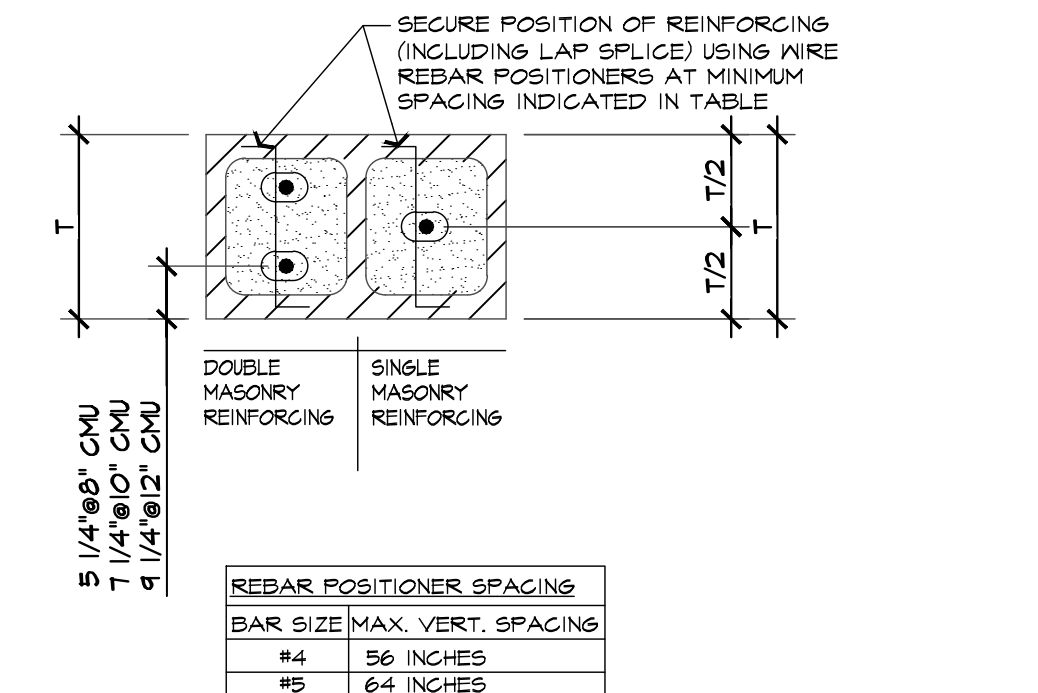
**11**  
5.103  
**TYPICAL PLANS DETAILS @ CMU WALL**  
NOT TO SCALE



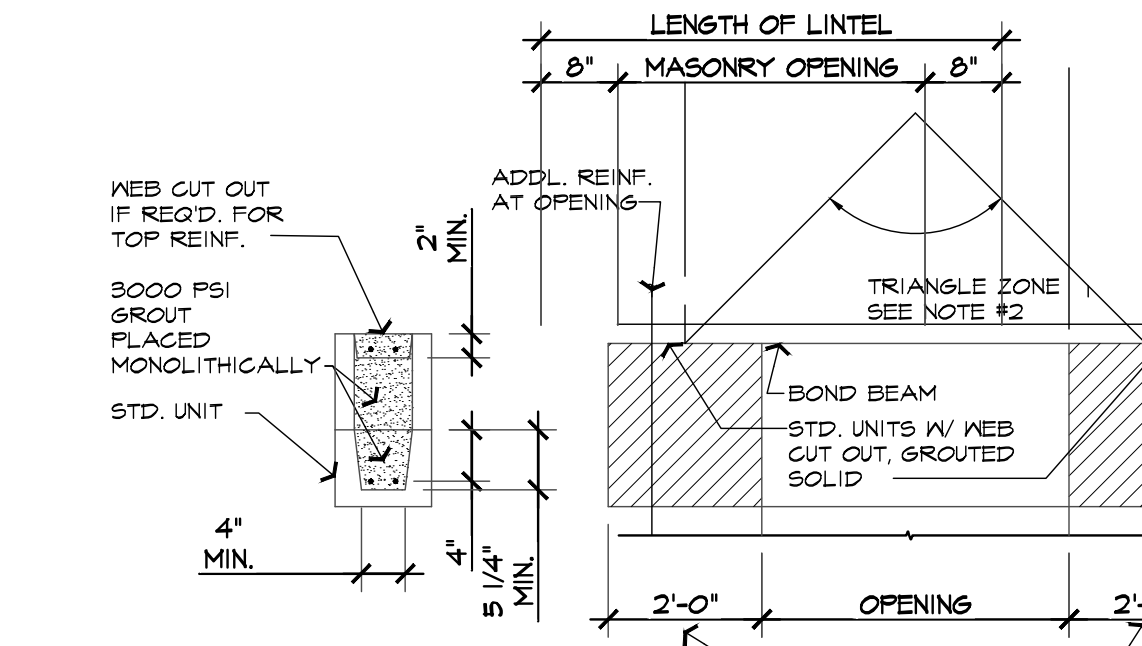
**10**  
5.103  
**TYPICAL GROUTING OF MASONRY WALL AT STEEL BEAM BEARING**  
NOT TO SCALE



**9**  
5.103  
**TYPICAL LINTEL BEARING DETAIL**  
NOT TO SCALE



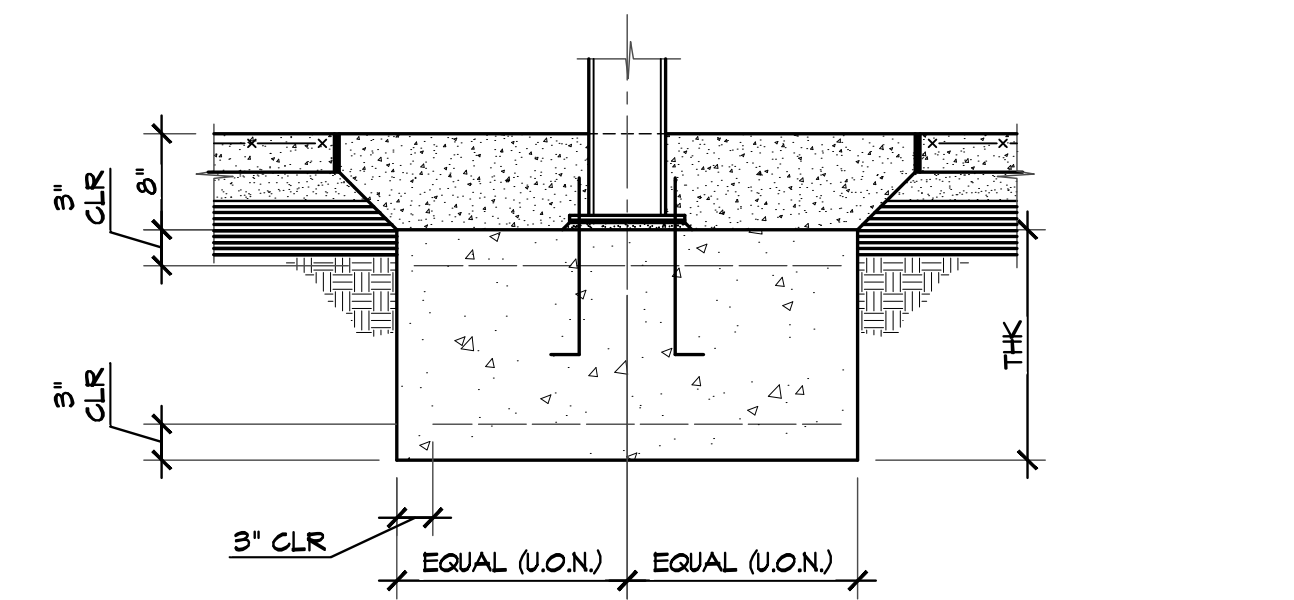
**8**  
5.103  
**TYPICAL WALL REINFORCING**  
NOT TO SCALE



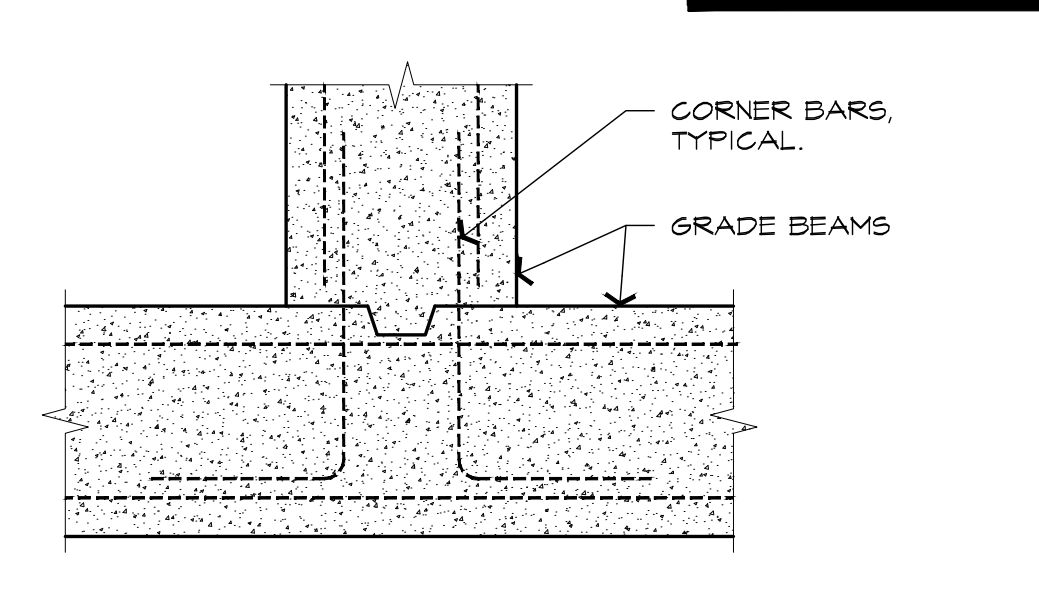
**7**  
5.103  
**TYP. MASONRY LINTEL DETAIL**  
NOT TO SCALE

- NOTES:
- PLACE LINTEL BEAMS CENTERED ON BLOCK, UNO.
  - ALL EXTERIOR LINTEL PLATES AND ANGLES TO BE GALVANIZED (690 COATING)
  - LINTELS NOT SPECIFICALLY SIZED BY DRAWINGS AND DETAIL SECTIONS SHALL COMPLY WITH THE FOLLOWING:
    - WALLS OR VENEERS OF 4\"/>

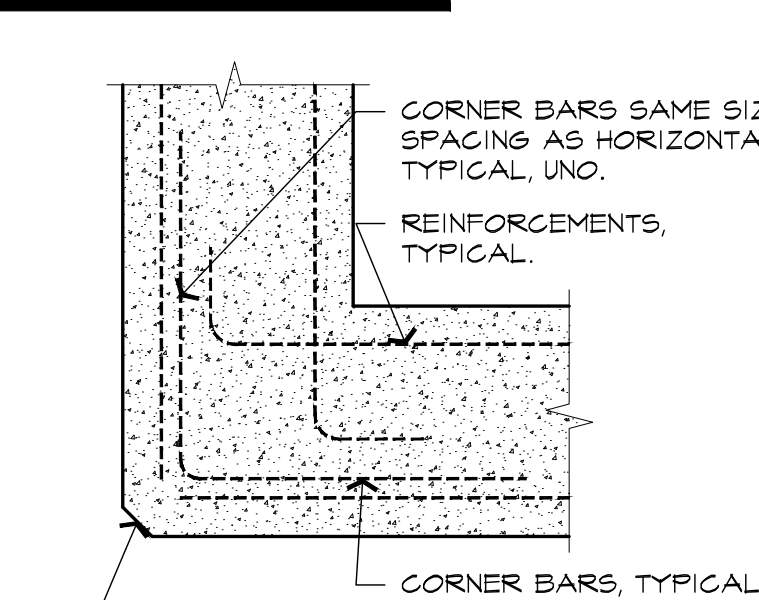
REFER TO FOUNDATION PLAN AND OTHER DETAILS FOR ADDITIONAL REQUIREMENTS THAT ARE NOT DEPICTED ON THESE DETAILS SUCH AS, BUT LIMITED TO, WATER STOPS AND WATER PROOFING.



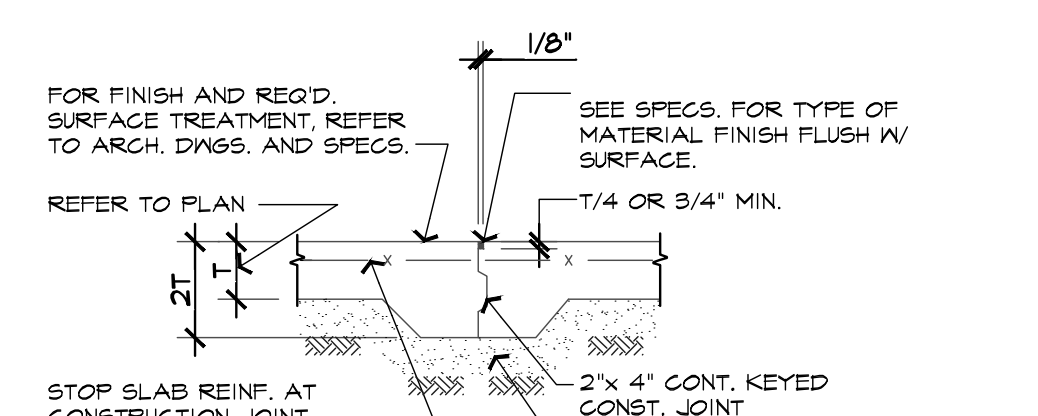
**5**  
5.103  
**FOOTING WITHOUT PIER CURB PERPENDICULAR TO JOIST**  
NOT TO SCALE



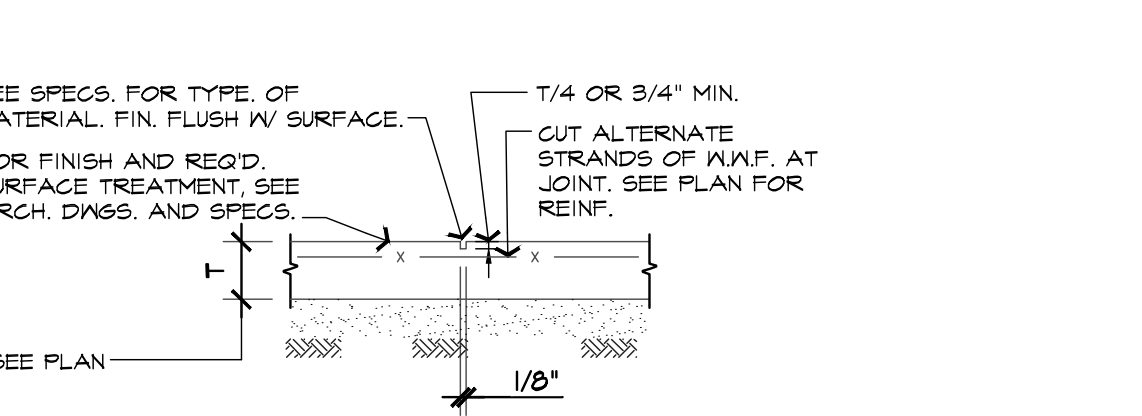
**4**  
5.103  
**TYPICAL INTERSECTION OF TWO GRADE BEAMS**  
NOT TO SCALE



**3**  
5.103  
**TYPICAL INTERSECTION OF TWO GRADE BEAMS**  
NOT TO SCALE



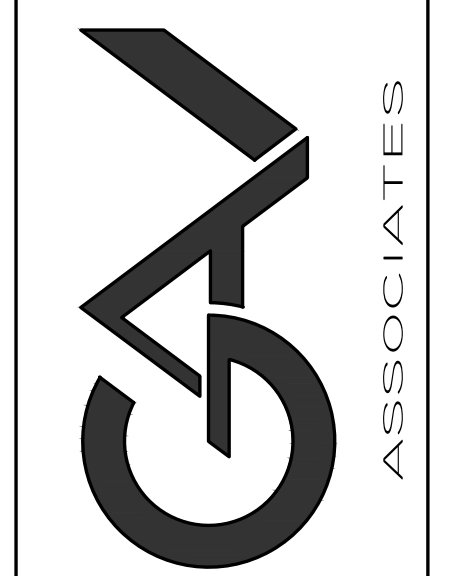
**2**  
5.103  
**TYPICAL SLAB CONSTRUCTION JOINT**  
NOT TO SCALE



**1**  
5.103  
**TYPICAL SLAB CONTROL JOINT**  
NOT TO SCALE

ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL  
G.A.V. ASSOCIATES, INC.  
5801 ORCHARD LAKE RD., STE. 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9191  
WEB: WWW.GAVASSOCIATES.COM

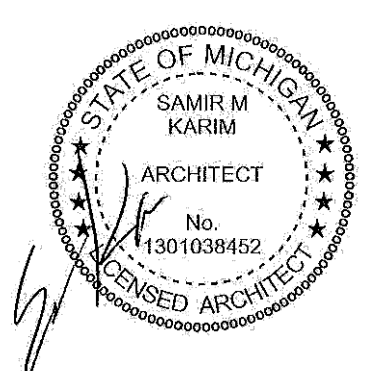


4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
UNION LAKE & COOLEY LAKE ROADS  
COOLEY LAKE ROAD  
WHITE LAKE, MICHIGAN

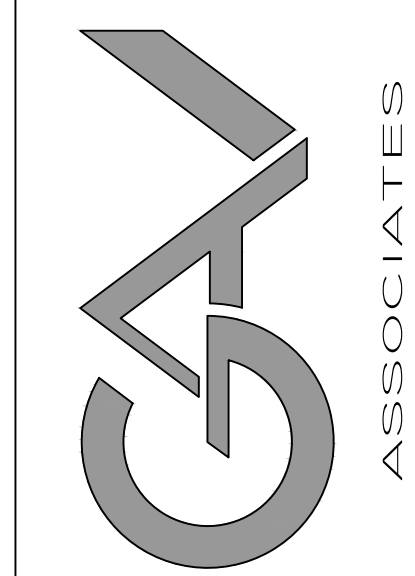
DRAWN:	DESIGNED:	CHECKED:
SSA	GA	GA

SCALE:  
FILE NAME: 21096\_S104  
JOB #: 21096  
SHEET TITLE  
SECTIONS AND DETAILS  
SHEET #  
**S.104**



ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
 RESIDENTIAL  
 COMMERCIAL  
 INDUSTRIAL  
**G.A.V. ASSOCIATES, INC.**  
 24051 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9101  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
DS	GA	GA
SCALE : AS NOTED		
FILE NAME : 21096_M000		
JOB # : 21096		
SHEET TITLE		
SYMBOLS AND ABBREVIATIONS		
SHEET #		
M.000		



MECH. SHEET INDEX	
SHEET No.	DESCRIPTION
M.000	SYMBOLS AND ABBREVIATIONS
M.100	MECHANICAL PLAN, SCHEDULES & DETAILS

**NOTE:**  
 NOT ALL SYMBOLS AND ABBREVIATIONS  
 ARE APPLICABLE TO THIS PROJECT

**H.V.A.C. SYMBOLS**

	SPIN-IN FITTING W/DAMPER
	FLEXIBLE DUCT
	RETURN AIR GRILLE
	SUPPLY AIR DIFFUSER
	HORIZONTAL FIRE DAMPER
	VERTICAL FIRE DAMPER
	HORIZONTAL FIRE & SMOKE DAMPER
	VERTICAL FIRE & SMOKE DAMPER
	VOLUME DAMPER
	RECTANGULAR TO ROUND TRANSITION
	MOTORIZED AIR DAMPER
	TRANSFER BOOT

**ABBREVIATIONS**

A.F.F	ABOVE FINISH FLOOR
C.S.D.	CEILING SUPPLY DIFFUSER
C.F.M.	CUBIC FEET PER MINUTE
C.O.	CLEAN OUT
COMB.	COMBUSTION
C.P.	CIRCULATING PUMP
DPR.	DAMPER
D.F.	DRINKING FOUNTAIN
E.	EXISTING
E.F.	EXHAUST FAN
ER-#	EXHAUST REGISTER
EXH.	EXHAUST
EWC	ELECTRIC WATER COOLER
F.C.O.	FLOOR CLEANOUT
F.D.	FLOOR DRAIN
F.D.	FIRE DAMPER
H.B.	HOSE BIBB
IE	INVERT ELEVATION
LAV.	LAVATORY
N.C.	NEW CONNECTION/ NORMALLY CLOSED
O.A.	OUTSIDE AIR
P.H.	PHYSICAL HANDICAPPED
R.A.	RETURN AIR
R.C.	RAIN CONDUCTOR
E.D.H.	ELECTRIC DUCT HEATER
RG -#	RETURN AIR GRILLE
R.P.B.P.	REDUCED PRESSURE BACKFLOW PREVENTER
RR-#	RETURN AIR REGISTER
S.A.	SUPPLY AIR
S-1	SUPPLY DIFFUSER
SR-#	SUPPLY REGISTER
S.F.	SQUARE FEET
SAN.	SANITARY
S.S.	SERVICE SINK
SHWR.	SHOWER
ST.	STORM
T.G.	TRANSFER GRILLE
T.P.	TRAP PRIMER
U/GRD.	UNDERGROUND
U.H.	UNIT HEATER
UR.	URINAL
V.	VENT
V.T.R.	VENT THRU ROOF
W.	WASTE
W.C.	WATER CLOSET
W.C.O.	WALL CLEANOUT
W.H.	WATER HEATER

**PLUMBING SYMBOLS**

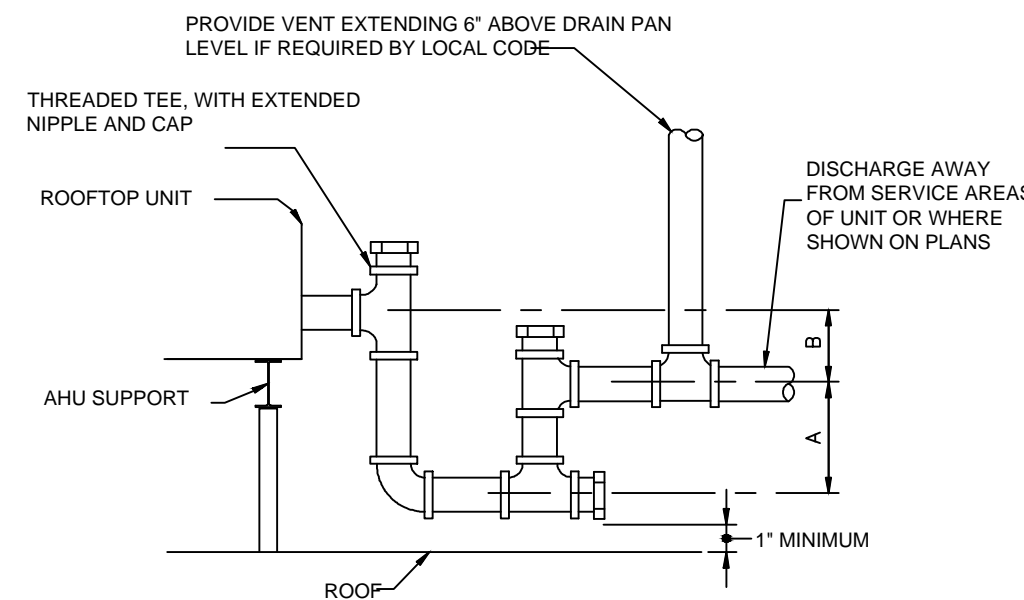
	DOMESTIC COLD WATER (C.W.)
	DOMESTIC HOT WATER (H.W.)
	DOMESTIC HOT WATER RETURN (H.W.R.)
	NATURAL GAS
	SANITARY SEWER
	STORM SEWER
	VENT
	GATE VALVE
	CHECK VALVE
	BALANCING VALVE
	THERMOMETER
	STRAINER
	UNION
	FLEXIBLE CONNECTOR
	BALL VALVE
	THERMOSTAT
	NEW CONNECTION

**MECHANICAL AND PLUMBING NOTES**

- A. WATER SUPPLY SYSTEM**
- ALL PLUMBING FIXTURES MUST CONFORM TO BUT NOT LIMITED TO SECTION 6 PROTECTION OF POTABLE WATER SUPPLY OF THE 2012 MICHIGAN PLUMBING CODE AND THE STANDARDS OF THE ASSE-AMERICAN SOCIETY OF SANITARY ENGINEERS.
  - ALL PIPING SHALL BE TYPE L COPPER, INSULATED WITH 1 INCH PLENUM RATED FIBERGLASS WRAP.
  - PROVIDE SHUT-OFF VALVE AT TENANT AREA AS INDICATED ON THE PLAN.
- B. SANITARY SEWER SYSTEM**
- ALL SANITARY SEWER PIPING SHALL BE CAST IRON ABOVE FLOOR. PVC PIPING SHALL BE PERMITTED BELOW THE FLOOR SLAB IF APPROVED BY AHJ.
  - SANITARY SEWER PIPING SHALL BE SLOPED PER FOOT. CLEANOUTS SHALL BE IN ACCORDANCE WITH UP TO DATE PLUMBING CODES IN THE LOCATION OF THE BUILDING.
  - PROVIDE SANITARY VENTS AND VTR'S AT INTERIOR WALLS AS REQUIRED.
  - PROVIDE CLEAN OUTS AT EVERY CHANGE OF DIRECTION GREATER THAN 45 DEGREES AND EVERY 50 FEET STRAIGHT RUN.
- C. STORM SEWER SYSTEM**
- STORM SEWER PIPING MAY BE PCV BELOW THE FLOOR SLAB IF APPROVED BY AHJ.
  - METAL ROOF LEADERS SHALL BE CONNECTED TO UNDERGROUND STORM SEWER PIPING.
  - ALL PIPING SHALL BE INSULATED WITH 1 INCH PLENUM RATED FIBERGLASS WRAP.
  - CLEANOUTS ARE TO BE PROVIDED THE SAME AS REQUIRED FOR SANITARY PIPING.
  - OVERFLOW NOZZLE, PER ARCHITECTURAL TRADE.
- D. MECHANICAL HVAC UNITS**
- MECHANICAL ROOF TOP UNITS, CURBS AND ACCESSORIES AS SPECIFIED ARE TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
  - GAS PIPING FROM GAS METER TO ROOF TOP HVAC UNITS SHALL BE PROVIDED AND INSTALLED PER GAS COMPANY AND ASHRAE STANDARDS.
  - GAS PIPING SHALL BE SIZED BY THE MECHANICAL CONTRACTOR PER UTILITY COMPANY AND ROOF TOP UNIT MANUFACTURER'S REQUIREMENTS.
  - GAS PIPING ON ROOF TO CONNECT TO EACH CORRESPONDING TENANT GAS METER. SEE MEP-200 FOR GAS PIPE ROOF SUPPORT DETAILS.

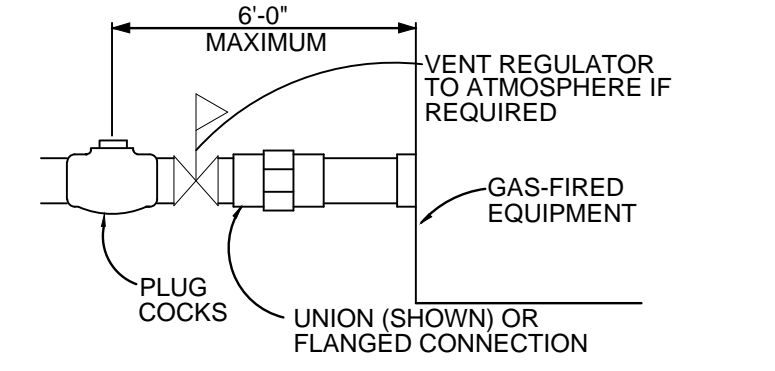
**KEYED MECHANICAL NOTES**

- GAS SERVICE MAIN COORDINATE WITH CIVIL & UTILITY CO.
- 2 INCH DOMESTIC WATER METER PER THE CITY REQUIREMENTS. SEE DOMESTIC WATER METER RISER DETAIL ON THIS SHEET.
- 6 INCH ROOF SUMP 6 INCH CAST IRON HORIZONTAL TO 6 INCH VERTICAL DOWN FACE OF BACK WALL WITH CLEAN OUT AT BASE. HOLD VERTICAL CONDUCTOR TIGHT TO BACK WALL FACE. REFER TO ARCHITECTURAL DRAWINGS FOR TYPICAL ROOF SUMP DETAIL AND PLUMBING GENERAL NOTES FOR PIPE INSULATION REQUIREMENTS.
- 6 INCH OVERFLOW ROOF SUMP TO 6 INCH HORIZONTAL CAST IRON OVERFLOW CONDUCTOR IN JOIST SPACE. SLOPE AT MINIMUM " " PER L.F. HOLD CONDUCTOR AS HIGH AS POSSIBLE WITHIN JOIST SPACE. REFER TO ARCHITECTURAL DRAWINGS FOR TYPICAL ROOF OVERFLOW NOZZLE DETAIL AND PLUMBING GENERAL NOTES FOR PIPE INSULATION REQUIREMENTS.
- 6 INCH CAST IRON STORM ABOVE. SLOPE AT MINIMUM 1/8" PER L.F.
- 8 INCH BUILDING STORM SEWER LEAD, COORDINATE SITE STORM LEAD SIZE, INVERT ELEVATION AND LOCATION WITH CIVIL.
- 6 INCH SANITARY SEWER UNDERGROUND. PITCH AT MINIMUM " " PER L.F.
- 6 INCH BUILDING SANITARY LEAD-COORDINATE SITE SANITARY SIZE, INVERT ELEVATION AND LOCATION WITH CIVIL.
- GAS SERVICE MAIN COORDINATE WITH CIVIL & UTILITY CO.
- BUILDING HOSE BIBS TO BE ON HOUSE METER. VERIFY EXACT LOCATION IN FIELD W/ OWNER AND CONTRACTOR.



A = GREATER OF 4" OR 1/2" PLUS ROOFTOP UNIT TOTAL PRESSURE IN INCHES-WATER COLUMN.  
 DRAWTHRU:  
 B = 1" PLUS FAN SUCTION PRESSURE IN INCHES WATER COLUMN  
 NOTES:  
 1. 1" MINIMUM PIPE SI E OR SI E PER DRAIN TAP IN ROOFTOP UNIT.

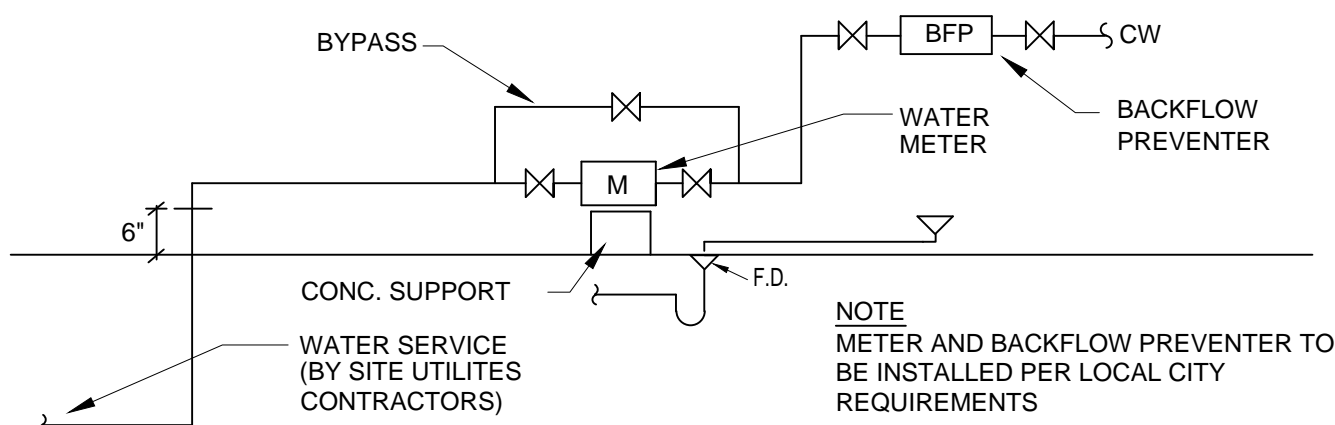
**CONDENSATE DRAIN TRAP**  
 NO SCALE



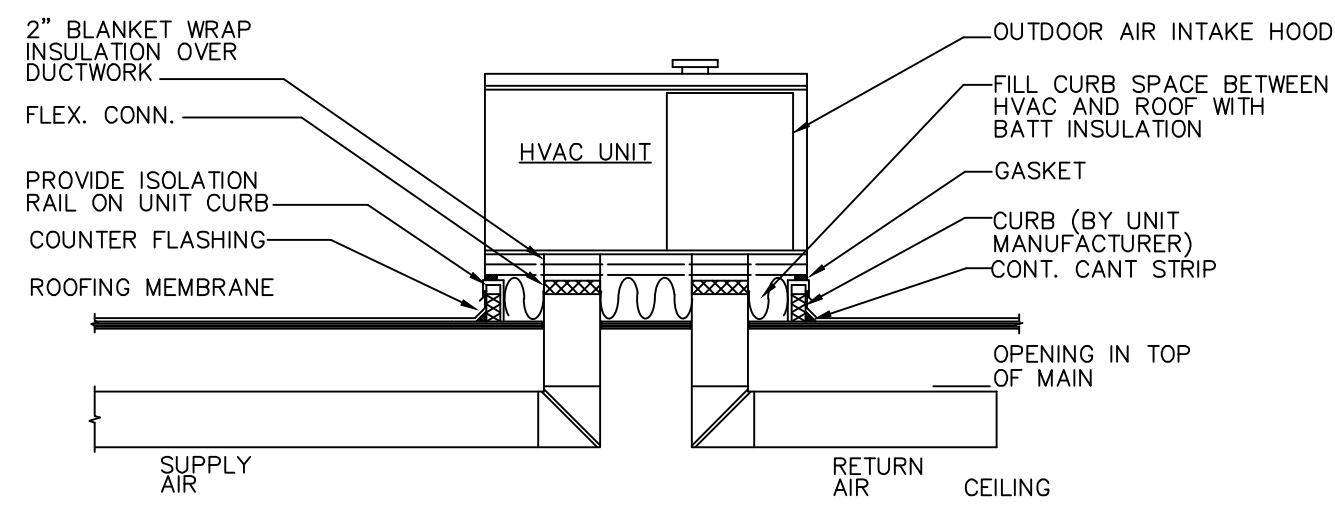
**TYPICAL GAS PIPING CONNECTION**  
 NO SCALE

HVAC UNIT SCHEDULE		
HVAC UNIT	MANUFACTURER	DESCRIPTION
1,4	CARRIER	MODEL # 48HC05, NOMINAL 4 TON COOLING: TOTAL= 48.5 MBH, SENSIBLE = 38.1 MBH, 1600 CFM TOTAL, 368 CFM MIN. OUTSIDE AIR, HEATING: GAS INPUT= 150 CFH, GAS OUTPUT= 117 CFH, 208-3-60 4W, 32 MCA, 45A MOC, STD. UNIT WEIGHT 850 LBS
2,3	CARRIER	MODEL # 48HC04, NOMINAL 3 TON COOLING: TOTAL= 36 MBH, SENSIBLE = 28.3 MBH, 1200 CFM TOTAL, 276 CFM MIN. OUTSIDE AIR, HEATING: GAS INPUT= 115 CFH, GAS OUTPUT= 89 CFH, 208-3-60 4W, 26 MCA, 30A MOC, STD. UNIT WEIGHT 700 LBS

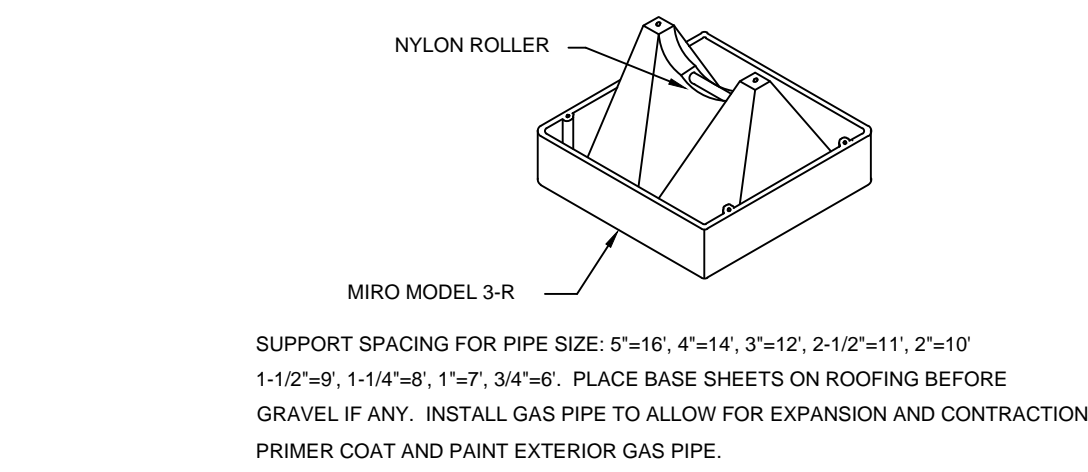
- NOTES:  
 PROVIDE AT EACH UNIT:  
 1. 18" MANUFACTURER'S ROOF CURB, U.N.O.  
 2. ENTHALPY CONTROLLED ECONOMIZER  
 3. THROW-AWAY FILTERS  
 4. BIRDSCREEN  
 5. RETURN AIR SMOKE DETECTORS FOR HVAC UNIT  
 6. PROVIDE GENERAL SERVICE DUPLEX ELECTRICAL OUTLET (GFCI) AT EACH HVAC ROOF TOP UNIT. OUTLET BY HVAC MANUFACTURER. CIRCUIT TO FUTURE TENANT PANEL, U.N.O.  
 7. PROVIDE PROGRAMMABLE THERMOSTAT AT ALL UNITS.  
 8. TRANE AND LENNOX ARE ACCEPTABLE ALTERNATE MANUFACTURERS  
 8.1. WHERE AN ALTERNATE HVAC UNIT MANUFACTURER IS PROVIDED, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE ALTERNATE UNITS WEIGHT WITH THE STRUCTURAL FRAMING INCLUDING BUT NOT LIMITED TO ANY ADDITIONAL STRUCTURAL REINFORCING THAT MAY BE REQUIRED TO SUPPORT THE NEW LOADS.



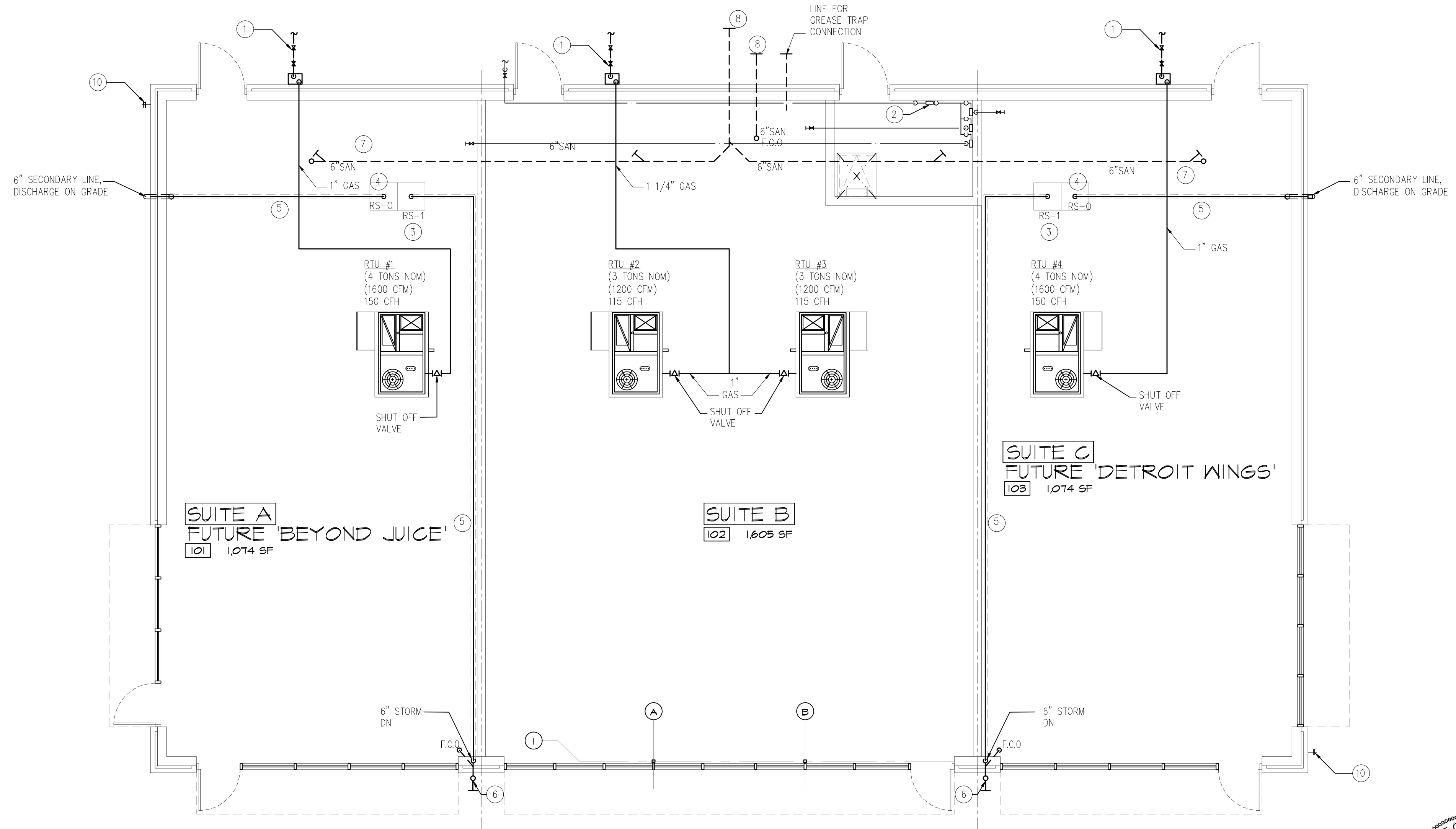
**WATER METER INSTALLATION DIAGRAM**  
 NO SCALE



**SECTION THROUGH HVAC UNIT**  
 SCALE: N.T.S.



**TYPICAL GAS PIPE SUPPORT DETAIL ON ROOF**  
 NO SCALE



**FLOOR PLAN-MECHANICAL**  
 SCALE: 3/16" = 1'-0"  
 NORTH



**ARCHITECTURAL DESIGN**  
 RESIDENTIAL  
 COMMERCIAL  
 INDUSTRIAL

G.A.V. ASSOCIATES, INC.  
 24091 ORCHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9101  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE & COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN: DS DESIGNED: DS CHECKED: MB

SCALE: 3/16" = 1'-0"

FILE NAME: 21096\_M101

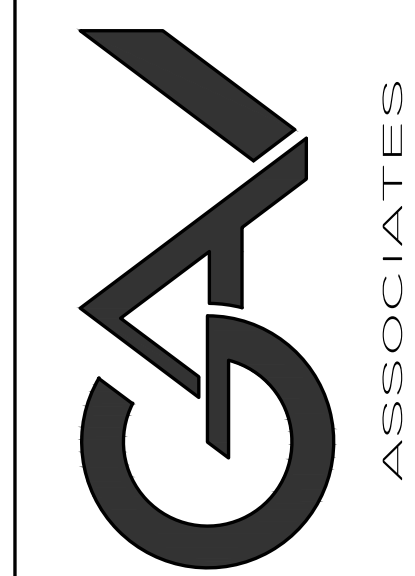
JOB #: 21096

SHEET TITLE  
**FLOOR PLAN-MECHANICAL**

SHEET #  
**M.101**

ISSUED FOR	Item D.
PERMITS	10/22/2021

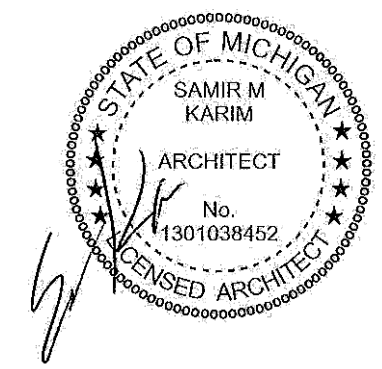
**ARCHITECTURAL DESIGN**  
 RESIDENTIAL COMMERCIAL INDUSTRIAL  
 G.A.V. ASSOCIATES, INC.  
 24051 RICHARD LAKE RD., STE. 100A  
 FARMINGTON, MICHIGAN 48336  
 PH: (248) 985-9101  
 WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
 UNION LAKE AND COOLEY LAKE ROADS  
 COOLEY LAKE ROAD  
 WHITE LAKE, MICHIGAN

DRAWN:	DESIGNED:	CHECKED:
DS	GA	GA
SCALE : NONE		
FILE NAME : 21096_E.100		
JOB # : 21096		
SHEET TITLE		
ELECTRICAL SYMBOLS & NOTES		
SHEET #		
111		



ELECTRICAL SYMBOLS LIST	
SYMBOLS	DESCRIPTION
NOTE: NOT ALL ELECTRICAL SYMBOLS SHOWN ARE USED FOR THIS PROJECT.	
—	CONDUIT RUN EXPOSED
- - - -	CONDUIT RUN CONCEALED
→	HOME RUN TO PANEL
—○—	FLEXIBLE CONDUIT
—●—	CONDUIT TURNED DOWN
—○—	CONDUIT TURNED UP
A,1	INDICATES PANEL A, BRANCH CIRCUIT #1
□	SERVICE TERMINAL CABINET
⊞	LIGHTING AND POWER PANEL (NORMAL – SURFACE)
⊞	POWER CONNECTION
⊞	DUPLEX RECEPTACLE, GROUNDING TYPE, CEILING MOUNTED FLUSH
⊞	DUPLEX RECEPTACLE, GROUNDING TYPE, WALL MOUNTED 18" AFF
GFCI ⊞	OVER THE COUNTER DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTER, WALL MOUNTED 6" ABOVE COUNTER
WP ⊞	WEATHERPROOF DUPLEX RECEPTACLE
⊞	SINGLE POLE SWITCH
⊞	MANUAL START WITH THERMAL OVERLOAD
⊞	DISCONNECT SWITCH – FUSED
⊞	DISCONNECT SWITCH – UNFUSED
⊞	JUNCTION BOX OR PULL BOX – SIZED PER NEC
⊞	SINGLE PHASE MOTOR
⊞	THREE PHASE MOTOR
○	INCANDESCENT OR HID FIXTURE AS INDICATED ON THE LIGHTING FIXTURES SCHEDULE
□	2'X4' FLUORESCENT LIGHTING FIXTURE AS INDICATED ON THE SCHEDULE
□	2'X4' NIGHT LIGHT FLUOR. FIXTURE AS INDICATED ON THE SCHEDULE
X ⊞	LED EXIT LIGHT – WALL MOUNTED OR CEILING MOUNTED
EM ⊞	EMERGENCY LIGHT – W/90 MINUTES NICAD BATTERY MAINTENANCE FREE
⊞	DUCT SMOKE DETECTOR – (COORDINATE WITH MECH. TRADE FOR TYPE)

GENERAL REQUIREMENTS	
A. CODES:	1. THE WORK SHALL COMPLY WITH THE CURRENT NATIONAL ELECTRIC CODE AND ALL APPLICABLE CODES.
B. COORDINATION:	1. THE WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES TO AVOID INTERFERENCE. REFER TO CIVIL, ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR CEILING HEIGHTS, ROOM FINISHES, DOOR SWINGS, BUILDING DIMENSIONS, LOCATION AND SIZES OF DUCTS, PIPES AND MECHANICAL EQUIPMENT ETC.. PROVIDE ADDITIONAL SUPPORT FOR RACEWAYS, BOXES, SWITCHES, CIRCUIT BREAKERS, MOTOR CONTROLLERS, FIXTURES AND THE LIKE, WHERE THE BUILDING STRUCTURE IS NOT ADAPTED OR SUITABLE FOR MOUNTING THE SAME DIRECTLY THERE ON. RACEWAYS SHALL NOT BE USED AS SUPPORTS FOR BOXES OR OTHER ELECTRICAL EQUIPMENT. 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT ALL EQUIPMENT FURNISHED UNDER OTHER TRADES IS COMPATIBLE WITH THE ELECTRICAL FEEDER PROVIDED UNDER THE ELECTRICAL TRADE. CASES OF DISCREPENCY MUST BE BROUGHT TO THE ENGINEER ATTENTION. 3. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERALLY THE LOCATIONS OF MATERIALS AND EQUIPMENT. THESE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE.
C. TESTING:	1. THE CONTRACTOR SHALL MAKE ALL TESTS, ADJUSTMENTS, AND TRIAL OPERATIONS REQUIRED TO PLACE THE SYSTEM IN BALANCED AND SATISFACTORY OPERATING CONDITION.

ABBREVIATIONS	
A	AMPS
AC	ALTERNATE CURRENT
AFF	ABOVE FINISH FLOOR
AMP	AMPLIFIER
BKR	BREAKER
C.CND	CONDUIT
CUH	CABINET UNIT HEATER
CAT. NO.	CATALOG NUMBER
CKT.	CIRCUIT
CLG.	CEILING
CONT.	CONTRACTOR
C/T	CURRENT TRANSFORMER
D	DUCT SMOKE DETECTOR
D.E.CO.	DETROIT EDISON COMPANY
DN.	DOWN
DISC.	DISCONNECT
ELECT.	ELECTRICAL
EF	EXHAUST FAN
EXIST.	EXISTING
F	FIRE
FIXT.	FIXTURE
FL	FLOOR
GND.,G.	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSE POWER
KVA	KILO VOLT AMPERE
L.LTG.	LIGHTING
M.B.	MAIN BREAKER
MECH.	MECHANICAL
MIC	MICROPHONE
MIN.	MINIMUM
MTD	MOUNTED
N.T.S.	NOT TO SCALE
NO.	NUMBER
PNL	PANEL
PWR	POWER
R	RECEPTACLE
RM	ROOM
SD	SMOKE DETECTOR
SHT	SHEET
SW	SWITCH
TS	TIMER SWITCH
TYP.	TYPICAL
UM	UTILITY METER
VA	VOLT AMPERE
V	VOLT
W	WATTS
W/W	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFMR	TRANSFORMER

SITE ELECTRICAL NOTES	
1.	CADWELD #2/0 BARE COPPER GROUND WIRE TO GROUND ROD (3/4" X 10'-0"). TOP OF GROUND ROD SHALL BE 12" MIN. BELOW GRADE.
2.	REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF EXISTING UTILITY AND THE EXACT LOCATION OF UTILITY CO. CONCRETE PAD MOUNTED TRANSFORMER.
3.	PRIOR TO INSTALLATION OF THE CONCRETE PAD, COORDINATE THE WORK WITH UTILITY CO. FOR SPECIFIC DETAIL OF GROUNDING SYSTEM INSTALLATION OF THE TRANSFORMER.
4.	COORDINATE ALL NEW ELECTRICAL UNDERGROUND WORK WITH NEW AND EXISTING UNDERGROUND UTILITIES BEFORE INSTALLATION.
5.	PROVIDE WATERTIGHT HUBS AT CONDUIT ENTRANCES TO ALL ENCLOSURES MOUNTED OUTDOOR AND TO ALL WATERTIGHT (NEMA 4) ENCLOSURES MOUNTED INDOORS.
6.	ALL EXISTING DUCTS, MANHOLES, ETC. ARE APPROXIMATE LOCATIONS ONLY. THE ELECTRICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS IN THE FIELD.
7.	EXACT LOCATIONS MAYBE ADJUSTED IN THE FIELD TO AVOID EXISTING AND UNEXPECTED CONSTRUCTION OBSTACLES.
8.	IT SHALL BE THE CONTRACTOR RESPONSIBILITY TO EXERCISE EXTREME CAUTION WHILE EXCAVATING TO AVOID DAMAGE TO ANY BURIED UTILITY LINES, PIPING, CONDUIT, ETC., CONTRACTOR SHALL REPAIR OR REPLACE TO THE OWNER SATISFACTION ANY AND ALL DAMAGED UTILITY LINES, PIPING, CONDUIT, ETC., WHICH MAY BECOME DAMAGED DURING EXCAVATION OF THE NEW WORK AT NO EXTRA COST.

GENERAL NOTES & SPECIFICATIONS	
1.	CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY CHECK THE FIELD CONDITIONS PRIOR TO SUBMITTING HIS BID.
2.	CONTRACTOR SHALL BE PREPARED TO WORK CONTINUOUSLY AND EXPEDITIOUSLY TO COMPLETE THE WORK RIGHT ON SCHEDULE FOR A COMPLETE LIGHTING AND POWER SYSTEM.
3.	CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES.
4.	ALL WORK AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, CODES AND REGULATIONS AS WELL AS APPLICABLE CURRENT STANDARDS.
5.	CABINETS, MOTOR FRAMES, STARTERS, CONDUIT SYSTEM, PANELBOARDS, ETC., SHALL BE GROUNDED IN ACCORDANCE WITH THE LATEST N.E.C. AND LOCAL CODES.
6.	MATERIALS SHALL BE NEW AND BEAR THE U.L. LABEL OR LISTING, WHEREVER STANDARDS HAVE BEEN ESTABLISHED.
7.	COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES WITH OTHER TRADES BEFORE INSTALLATION.
8.	ALL WALL MOUNTED CONTROL DEVICES, LIGHTING SWITCHES SHALL BE 4'-0" A.F.F. UNLESS OTHERWISE NOTED ON THE DRAWINGS. SWITCHES SHALL BE 20A, 120/277V, 1 POLE, 2 POLE, 3 AND 4 WAY AS INDICATED, HUBBELL #1221 SERIES OR EQUAL.
9.	WALL MOUNTED DISCONNECT SWITCHES AND CONTROL PANELS SHALL BE 6'-0" TO TOP ABOVE FINISH FLOOR.
10.	EXPANSION FITTINGS SHALL BE PROVIDED FOR ALL CONDUIT CROSSING BUILDING EXPANSION JOINTS.
11.	ALL WEATHERPROOF (WP) DUPLEX RECEPTACLES SHALL BE INSTALLED HORIZONTALLY SUCH THAT COVER DOORS OPEN UPWARD.
12.	ALL PENETRATIONS OF FIRE WALLS OR FLOORS SHALL BE SEALED AFTER INSTALLATION OF CONDUIT WITH A FIRE RETARDANT SEALANT THAT IS RATED THE SAME AS THE FIRE WALL OR FLOOR.
13.	PROVIDE A GREEN GROUND CONDUCTOR IN ALL SYSTEMS CONDUITS INCLUDING BRANCH CIRCUIT CONDUITS FOR LIGHTING AND RECEPTACLES PER NEC TABLE 250-95.
14.	ALL CONDUIT SHALL BE 3/4" EMT (MIN.) AND THEY SHALL BE OF SIZES REQUIRED TO ACCOMMODATE NUMBER OF CONDUCTORS IN ACCORDANCE WITH NEC WIRING TABLES OR AS INDICATED ON DRAWINGS, WHICHEVER IS LARGER.
15.	FEEDERS SHALL BE TYPE "THW" OR "XHHW", AND ALL 120 VAC LIGHTING AND RECEPTACLE CIRCUITS RUN 2#12 (THWN/THHN) MIN. + GND IN 3/4" C MIN. TO THE LIGHTING PANELBOARD INDICATED UNLESS NOTED OTHERWISE. HOME RUN TO PANEL IF MORE THAN 80' SHALL BE #10 IN 3/4" C. OR CONTRACTOR SHALL USE A CONDUCTOR SO THAT VOLTAGE DROP IS LESS THAN 2%. ALL WIRE SHALL BE COPPER, HAVE 600 VOLT INSULATION AND INSTALLED IN CONDUIT.
16.	RECEPTACLES SHALL BE DUPLEX GROUNDING TYPE 20A, 125V, HUBBELL #5362 OR EQUAL. SPECIAL PURPOSE RECEPTACLES 30A, 40A, 50A-2P OR 3P, ETC., SHALL BE SPECIFICATIONS GRADE.
17.	WALL PLATES FOR SWITCHES, RECEPTACLES AND TELEPHONE OUTLETS SHALL BE SUPER STAINLESS STEEL, TYPE 302, HUBBELL #93000 SERIES OR EQUAL.
18.	SINGLE PHASE MOTOR STARTERS SHALL HAVE MANUAL TOGGLE SWITCH WITH THERMAL OVERLOADS, FLUSH MOUNTED WITH PILOT LIGHT, ALLEN-BRADLEY #600 OR EQUAL.
19.	THREE PHASE MOTOR STARTERS SHALL BE MAGNETIC TYPE, WITH FUSED CONTROL TRANSFORMER (120 VOLT SECONDARY) AND AUXILIARY CONTACTS AS REQUIRED, ALLEN BRADLEY #712 OR EQUAL.
20.	DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, FUSED OR NON-FUSED AS INDICATED, IN A NEMA 1 OR 12 ENCLOSURE, DISCONNECT SWITCHES INSTALLED OUTDOOR SHALL BE NEMA 3R ENCLOSURE, CUTLER-HAMMER, SQUARE D, OR G.E.
21.	METER CENTERS, OR PANELBOARDS SHALL BE SIEMENS, SQUARE D, CUTLER-HAMMER, OR G.E. SIZE ON THE DRAWINGS.
22.	FOR BRANCH CIRCUIT PANELBOARD TERMINATION AND CIRCUITRY, REFER TO PANEL SCHEDULES.
23.	FOR TYPE OF LIGHTING FIXTURES REFER TO LIGHTING FIXTURE SCHEDULE.
24.	ALL ELECTRICAL EQUIPMENT MOUNTED ON EXTERIOR WALLS SHALL HAVE A 1/2" MIN. AIR SPACE BETWEEN WALL AND EQUIPMENT. PROVIDE A NON-CORROSIVE SPACERS AND BRACKETS AS REQUIRED.
25.	VERIFY ALL ROUGH-IN LOCATIONS, FINAL CONNECTIONS, MOUNTING HEIGHTS, VOLTAGES AND PHASES WITH OTHER TRADES EQUIPMENT SUPPLIERS SHOP DRAWINGS PRIOR TO INSTALLATION OF EQUIPMENT. FAILURE TO DO SO SHALL RESULT IN NO EXTRA CHARGE TO THE OWNER.
26.	EXACT LOCATIONS OF ELECTRICAL EQUIPMENT MAYBE ADJUSTED IN THE FIELD TO AVOID EXISTING AND UNEXPECTED CONSTRUCTION OBSTACLES.
27.	VERIFY EXACT LOCATION OF ALL CONTROL PANELS ETC., FOR MECHANICAL EQUIPMENT, AND WIRE ACCORDINGLY FOR A COMPLETE FUNCTIONAL SYSTEM.
29.	WHEN THE JOB IS COMPLETED, THE CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH CERTIFICATE OF APPROVAL FROM THE LOCAL INSPECTION AUTHORITY. THE CONTRACTOR SHALL GIVE THE OWNER A WRITTEN GUARANTEE THAT HE WILL MAKE GOOD, AT HIS OWN EXPENSE, ANY DEFECTS IN MATERIALS OR WORKMANSHIP WHICH MAY DEVELOP WITHIN ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE.

**NOTES: (FOR POWER)**

- FOR GENERAL NOTES SEE SHEET E-100
- ELECT. CONT. TO COORDINATE THE SERVICE ENTRANCE EQUIP'T LOCATIONS & INSTALLATIONS WITH UTILITY COMPANY AND THE OWNER PRIOR TO INSTALLATION.
- REQUIRE 1000A TO SERVICE METERS MODULE, @ 208/120V, 3Ø, 4W, UNDERGROUND SECONDARY SERVICE ENTRANCE.
- REQUIRE 600A TO SERVICE ENTRANCE C/T CABINET, @ 208/120V, 3Ø, 4W, UNDERGROUND SECONDARY SERVICE ENTRANCE.
- ELECTRICAL CONTRACTOR TO COORDINATE ALL MECHANICAL INTERLOCK WITH MECHANICAL TRADE AS REQUIRED.

**NOTES: (FOR LIGHTING)**

- FOR GENERAL NOTES SEE SHEET E-100.
- BATTERY BACK-UP EXIT AND EMERGENCY LIGHTS SHALL BE FED FROM THE SAME CIRCUIT AS NORMAL LIGHTING IN THEIR RESPECTIVE AREAS AND BE CONNECTED AHEAD OF ANY LOCAL SWITCHES.
- PROVIDE A SEPARATE RACEWAY SYSTEM FOR ALL NIGHTLIGHTS, EXIT LIGHTS, AND EMERGENCY LIGHTS AS REQUIRED PER LATEST NEC.

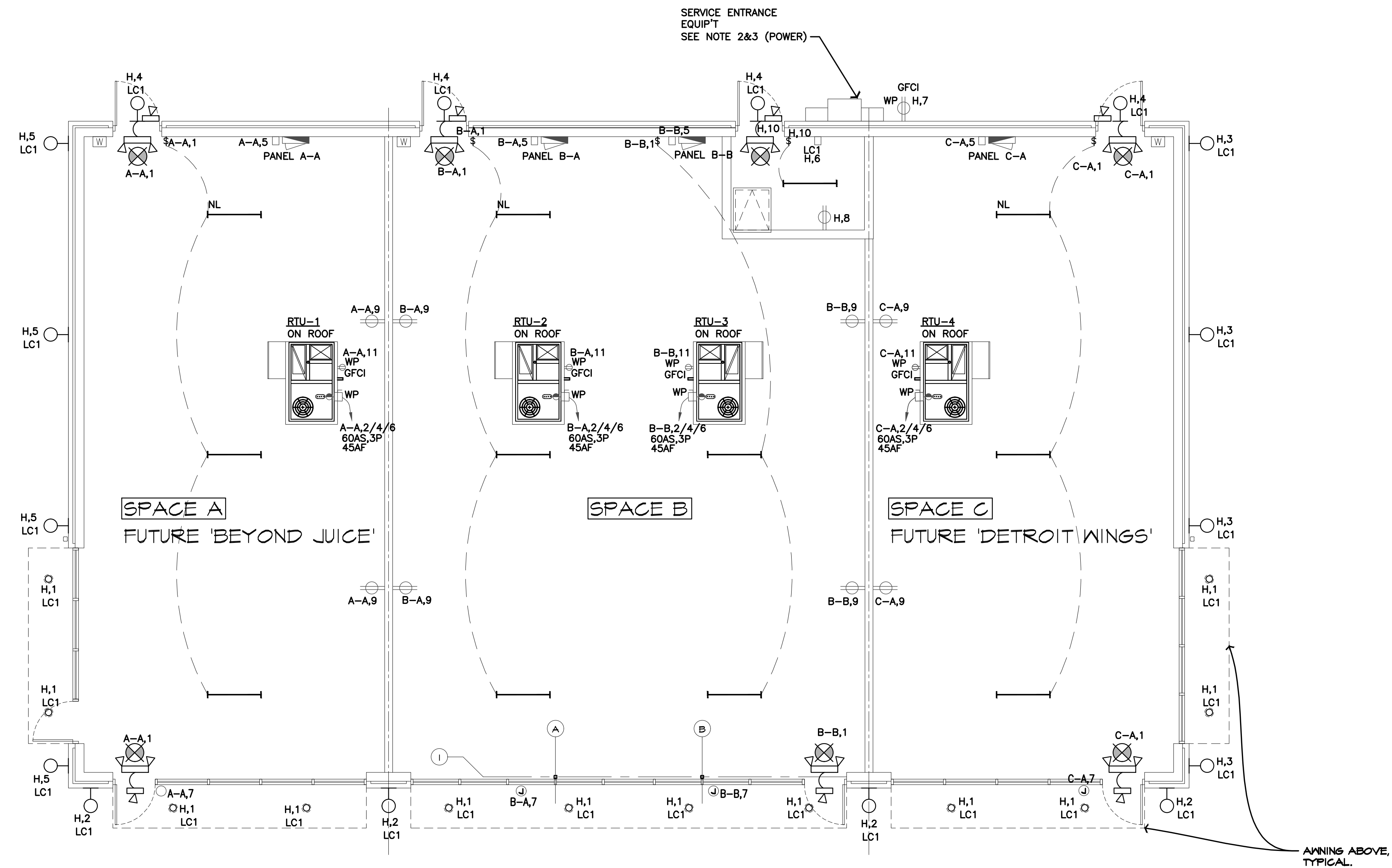
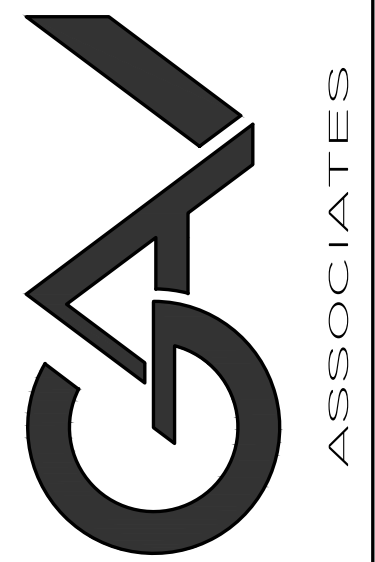
LIGHTING FIXTURE SCHEDULE		
=====	1'x4' LED SERIES LUMINAIRE	MOUNTED @ 12'-0"
○	ARCHITECTURAL WALL LED LUMINAIRE SCENCE 674-91-WP SERIES BY COOPER LIGHTING. SIZE 31" IN CC COLOR (CUSTOM COLOR) WITH LED LAMPS.	REFER TO ELEVATIONS SHEET A.201
○	COMMERCIAL RECESSED EXTERIOR LED LAMP DOWNLIGHT (8" ROUND)	REFER TO ELEVATIONS SHEET A.201
☐	POLYCARBONATE EXIT UNIT COMBO LIGHTING FIXTURE W/NI-CAD BATTERY FOR 90 MINUTES MAINTENANCE FREE IV SELF-DIAGNOSTIC	ABOVE DOOR HEAD ON MASONRY
☐	EXTERIOR REMOTE HEAD EMERGENCY LAMPHEAD WIRED TO ADJACENT EMERGENCY LIGHT AT INTERIOR	ABOVE DOOR HEAD ON MASONRY
NOTE:	COORDINATE ALL LIGHT FIXTURE SELECTIONS AND COLORS WITH OWNER FOR APPROVALS. TYPICAL FOR ALL FIXTURES.	

ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**

RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL

G.A.V. ASSOCIATES, INC  
24091 ORCHARD LAKE RD., STE. 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9101  
WEB: WWW.GAVASSOCIATES.COM



4 CORNERS

NEW RETAIL CENTER SHELL FOR:  
UNION LAKE AND COOLEY LAKE ROADS  
COOLEY LAKE ROAD  
WHITE LAKE, MICHIGAN

**ELECTRICAL FLOOR PLAN**  
SCALE: 3/16" = 1'-0"  
NORTH



DRAWN:	DESIGNED:	CHECKED:
DS	GA	GA

SCALE : 3/16" = 1'-0"

FILE NAME : 21096\_E102

JOB # : 21096

SHEET TITLE  
ELECTRICAL  
PLAN

SHEET #  
E102



ISSUED FOR	Item D.
PERMITS	10.22.2021

**ARCHITECTURAL DESIGN**  
RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL

G.A.V. ASSOCIATES, INC.  
24801 ORCHARD LAKE RD., SUITE 100A  
FARMINGTON, MICHIGAN 48336  
PH: (248) 985-9191  
WEB: WWW.GAVASSOCIATES.COM



**PANEL DESIGNATION: LP-A-A (LEASE SPACE 'A')** SERVICE: 208/120V, 3ø, 4W ENCLOSURE: NEMA-1  
TYPE: SURFACE MTD (N00D) MAINS: 200A, M.B., WITH 225A COPPER BUS RATING: 65,000 AIC  
LOCATION: LEASE SPACE "A"

CKT NO.	DESCRIPTION	WIRE SIZE	CKT. BKR.			LOAD KVA / PHASE			CKT. BKR.			WIRE SIZE	DESCRIPTION	CKT NO.		
			A	P	A	B	C	A	B	C	P				A	
* 1	L- NIGHT LIGHTS, EXIT/EMERG.	#12	20	1	0.5	—	—	—	4.5	4.5	4.5	3	45	#8	RTU #1	2
3	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	4
* 5	OUTDOOR SIGN TIMER SWITCH (TS)	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	6
* 7	OUTDOOR SIGN	#12	20	1	1.0	—	—	—	—	—	—	—	—	—	—	8
9	R- STORE	#12	20	1	—	0.4	—	—	—	—	—	—	—	—	—	10
11	R- ROOF	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	12
13	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	14
15	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	16
17	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	18
19	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	20
21	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	22
23	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	24
25	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	26
27	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	28
29	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	30
31	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	32
33	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	34
35	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	36
37	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	38
39	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	40
41	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	42
CONNECTED LOAD:		16.1	KVA	1.5	0.4	0.7	4.5	4.5	4.5	G BUS BAR						
DEMAND LOAD:		16.1	KVA													

\* PROVIDE LOCK-ON TRIP FREE DEVICE FOR SINGLE POLE CIRCUIT BREAKER.

**PANEL DESIGNATION: LP-B-A (LEASE SPACE 'B')** SERVICE: 208/120V, 3ø, 4W ENCLOSURE: NEMA-1  
TYPE: SURFACE MTD (N00D) MAINS: 200A, M.B., WITH 225A COPPER BUS RATING: 65,000 AIC  
LOCATION: LEASE SPACE "B"

CKT NO.	DESCRIPTION	WIRE SIZE	CKT. BKR.			LOAD KVA / PHASE			CKT. BKR.			WIRE SIZE	DESCRIPTION	CKT NO.		
			A	P	A	B	C	A	B	C	P				A	
* 1	L- NIGHT LIGHTS, EXIT/EMERG.	#12	20	1	0.5	—	—	—	3.5	3.5	3.5	3	30	#8	RTU #1	2
3	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	4
* 5	OUTDOOR SIGN TIMER SWITCH (TS)	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	6
* 7	OUTDOOR SIGN	#12	20	1	1.0	—	—	—	—	—	—	—	—	—	—	8
9	R- STORE	#12	20	1	—	0.4	—	—	—	—	—	—	—	—	—	10
11	R- ROOF	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	12
13	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	14
15	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	16
17	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	18
19	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	20
21	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	22
23	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	24
25	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	26
27	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	28
29	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	30
31	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	32
33	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	34
35	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	36
37	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	38
39	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	40
41	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	42
CONNECTED LOAD:		13.1	KVA	1.5	0.4	0.7	3.5	3.5	3.5	G BUS BAR						
DEMAND LOAD:		13.1	KVA													

\* PROVIDE LOCK-ON TRIP FREE DEVICE FOR SINGLE POLE CIRCUIT BREAKER.  
\*\* COORDINATE WITH MECHANICAL TRADE AND THE ELECTRICAL FLOOR PLANS ON WHICH HVAC UNIT SERVING THE OTHER LEASE SPACES.

**PANEL DESIGNATION: LP-A-A (LEASE SPACE 'A')** SERVICE: 208/120V, 3ø, 4W ENCLOSURE: NEMA-1  
TYPE: SURFACE MTD (N00D) MAINS: 200A, M.B., WITH 225A COPPER BUS RATING: 65,000 AIC  
LOCATION: LEASE SPACE "A"

CKT NO.	DESCRIPTION	WIRE SIZE	CKT. BKR.			LOAD KVA / PHASE			CKT. BKR.			WIRE SIZE	DESCRIPTION	CKT NO.		
			A	P	A	B	C	A	B	C	P				A	
* 1	L- NIGHT LIGHTS, EXIT/EMERG.	#12	20	1	0.5	—	—	—	3.5	3.5	3.5	3	30	#8	RTU #1	2
3	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	4
* 5	OUTDOOR SIGN TIMER SWITCH (TS)	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	6
* 7	OUTDOOR SIGN	#12	20	1	1.0	—	—	—	—	—	—	—	—	—	—	8
9	R- STORE	#12	20	1	—	0.4	—	—	—	—	—	—	—	—	—	10
11	R- ROOF	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	12
13	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	14
15	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	16
17	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	18
19	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	20
21	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	22
23	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	24
25	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	26
27	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	28
29	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	30
31	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	32
33	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	34
35	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	36
37	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	38
39	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	40
41	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	42
CONNECTED LOAD:		13.1	KVA	1.5	0.4	0.7	3.5	3.5	3.5	G BUS BAR						
DEMAND LOAD:		13.1	KVA													

\* PROVIDE LOCK-ON TRIP FREE DEVICE FOR SINGLE POLE CIRCUIT BREAKER.  
\*\* COORDINATE WITH MECHANICAL TRADE AND THE ELECTRICAL FLOOR PLANS ON WHICH HVAC UNIT SERVING THE OTHER LEASE SPACES.

**PANEL DESIGNATION: LP-A (LEASE SPACE 'C')** SERVICE: 208/120V, 3ø, 4W ENCLOSURE: NEMA-1  
TYPE: SURFACE MTD (N00D) MAINS: 200A, M.B., WITH 225A COPPER BUS RATING: 65,000 AIC  
LOCATION: LEASE SPACE "C"

CKT NO.	DESCRIPTION	WIRE SIZE	CKT. BKR.			LOAD KVA / PHASE			CKT. BKR.			WIRE SIZE	DESCRIPTION	CKT NO.		
			A	P	A	B	C	A	B	C	P				A	
* 1	L- NIGHT LIGHTS, EXIT/EMERG.	#12	20	1	0.3	—	—	—	4.5	4.5	4.5	3	45	#8	RTU #4	2
3	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	4
* 5	OUTDOOR SIGN TIMER SWITCH (TS)	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	6
* 7	OUTDOOR SIGN	#12	20	1	1.0	—	—	—	—	—	—	—	—	—	—	8
9	R- STORE	#12	20	1	—	0.4	—	—	—	—	—	—	—	—	—	10
11	R- ROOF	#12	20	1	—	—	—	—	—	—	—	—	—	—	—	12
13	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	14
15	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	16
17	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	18
19	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	20
21	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	22
23	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	24
25	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	26
27	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	28
29	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	30
31	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	32
33	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	34
35	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	36
37	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	38
39	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	40
41	SPARE	—	20	1	—	—	—	—	—	—	—	—	—	—	—	42
CONNECTED LOAD:		16.1	KVA	1.5	0.4	0.7	4.5	4.5	4.5	G BUS BAR						
DEMAND LOAD:		16.1	KVA													

\* PROVIDE LOCK-ON TRIP FREE DEVICE FOR SINGLE POLE CIRCUIT BREAKER.

**PANEL DESIGNATION: LP-H (HOUSE PANEL)** SERVICE: 208/120V, 3ø, 4W ENCLOSURE: NEMA-3R  
TYPE: SURFACE MTD (N00D) MAINS: 100A, M.B., WITH 125A COPPER BUS RATING: 65,000 AIC  
LOCATION: ROOF ACCESS ROOM

CKT NO.	DESCRIPTION	WIRE SIZE	CKT. BKR.			LOAD KVA / PHASE			CKT. BKR.			WIRE SIZE	DESCRIPTION	CKT NO.
			A	P	A	B	C	A	B	C	P			
1	L- EXTERIOR CANOPY LIGHTS	#10	30	1	1.0	—	—	—	1					