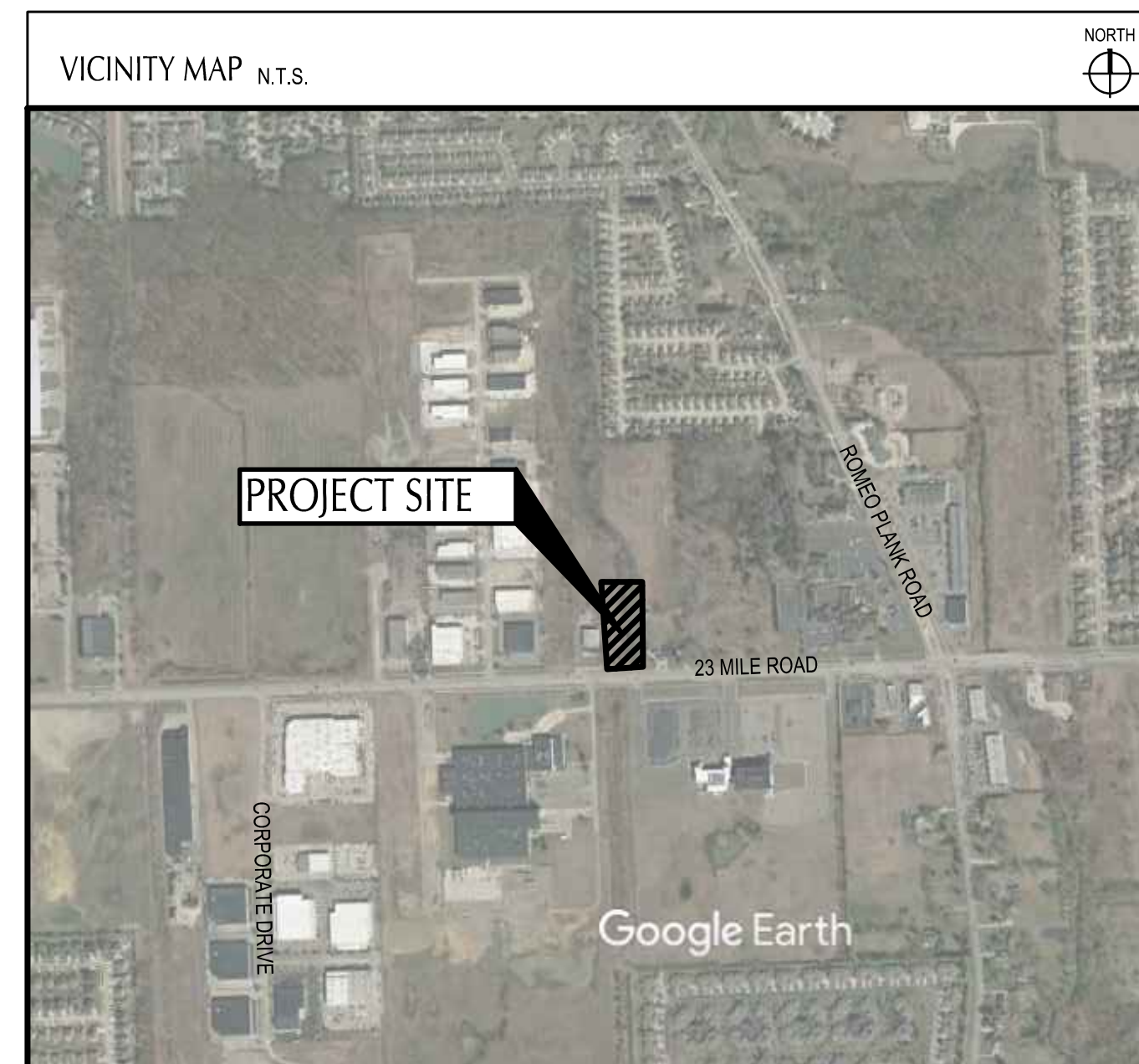


# IMPROVEMENT PLANS TACO BELL

17669 23 MILE ROAD  
MACOMB, MICHIGAN  
MAY, 2022



MAP DATA © 2022 GOOGLE

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**OWNER AND DEVELOPER**  
PETE ZINGAS  
645 GRISWOLD, SUITE 3486  
DETROIT, MI 48226

### PROJECT DESCRIPTION

THE SUBJECT PROJECT AREA IS 2.17 ACRE SITE WHICH IS A VACANT LOT. THE IMPROVEMENTS TO THIS SITE WILL INCLUDE BUT NOT LIMITED TO A NEW TACO BELL RESTAURANT, NEW PARKING LOT, CONCRETE SIDEWALKS, ALL APPURTENANT UTILITY CONNECTIONS, DETENTION POND, GRADING AND LANDSCAPING.

### MICHIGAN SPECIFICATION

THE STANDARD SPECIFICATIONS OF THE STATE OF MICHIGAN, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

### PLAN REPRODUCTION WARNING

THE PLANS HAVE BEEN PREPARED FOR PRINTING ON ANSI D (24"x36") SHEETS. PRINTING ON OTHER SIZE SHEETS MAY DISTORT SCALES. REFER TO GRAPHIC SCALES.

### Engineer's Certification

"I hereby certify that I have read the Township's Land Development Ordinance (and its related Engineering and Construction Standards), and I have prepared these plans in complete conformity with the requirements of said Ordinance."

Leonardo Sferra\*  
P.E. #

*\*My signature on this certification represents only items to the extent within GPD's scope of work and the sheets bearing my stamp/signature. As such, Contractor, Owner, and any Third-Party(ies) remain responsible for their respective roles.*

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY.: EA  
JOB NO.: 2021088.48

### TACO BELL

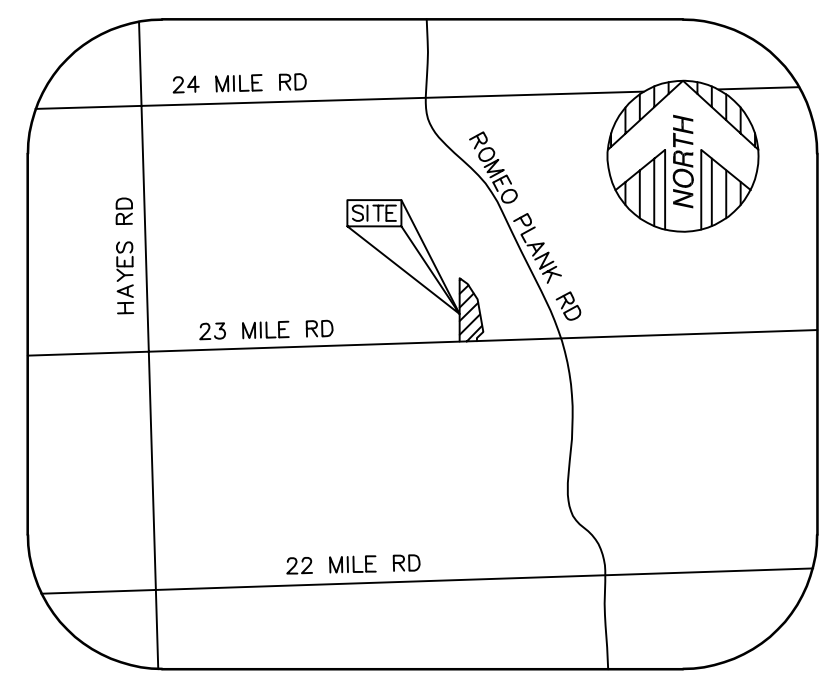
17669 23 Mile Road  
Macomb, MI 48042



ENDEAVOR 2.0

TITLE SHEET

TS-001



VICINITY MAP  
(NOT TO SCALE)

**PARKING**

NO MARKED PARKING ON SITE.

**PARCEL AREA**

141,514± SQUARE FEET = 3.248± ACRES

**BASIS OF BEARING**

NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.

**PARCEL AREA**

TACO BELL PARCEL:  
94,542± SQUARE FEET = 2.170± ACRES  
FUTURE DEVELOPMENT PARCEL:  
46,972± SQUARE FEET = 1.073± ACRES

**BENCHMARK**

**SITE BENCHMARK #1**  
ARROW ON FIRE HYDRANT, EAST OF EAST PROPERTY LINE, NORTH SIDE OF 23 MILE RD. ELEVATION = 611.36' (NAVD 88)

**SITE BENCHMARK #2**  
MAG NAIL IN NORTH MOST UTILITY POLE BY WEST PROPERTY LINE. ELEVATION = 608.83' (NAVD 88)

**MACOMB TOWNSHIP BENCHMARK #MA1684**  
ARROW ON HYDRANT, LOCATED WEST OF THE WEST ENTRANCE TO BUILDING #18201, ON THE NORTH SIDE OF 23 MILE ROAD. ELEVATION = 611.94' (NAVD 88)

**MACOMB TOWNSHIP BENCHMARK #MA1685**  
ARROW ON HYDRANT, LOCATED WEST OF ROMEO PLANK ROAD, ON THE NORTH SIDE OF 23 MILE ROAD, EAST OF HOUSE #17825. ELEVATION = 609.44'(R) 610.32'(M) (NAVD 88)

**SURVEYOR'S NOTE**

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

**TITLE REPORT NOTE**

ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE CHICAGO TITLE INSURANCE COMPANY COMMITMENT No. 501156862N1S, DATED SEPTEMBER 1, 2021, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

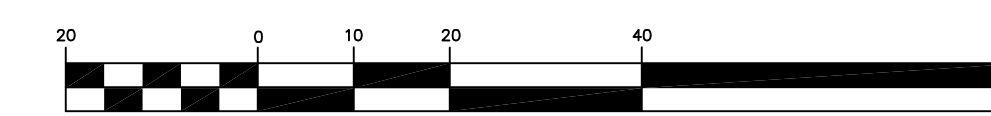
3. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO THE TOWNSHIP OF MACOMB, A MICHIGAN MUNICIPAL CORPORATION, RECORDED IN LIBER 3218, PAGE 848 AND LIBER 3218, PAGE 850, (AS SHOWN)

4. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO THE COUNTY OF MACOMB, RECORDED IN LIBER 3218, PAGE 848 AND LIBER 3218, PAGE 850, (AS SHOWN)

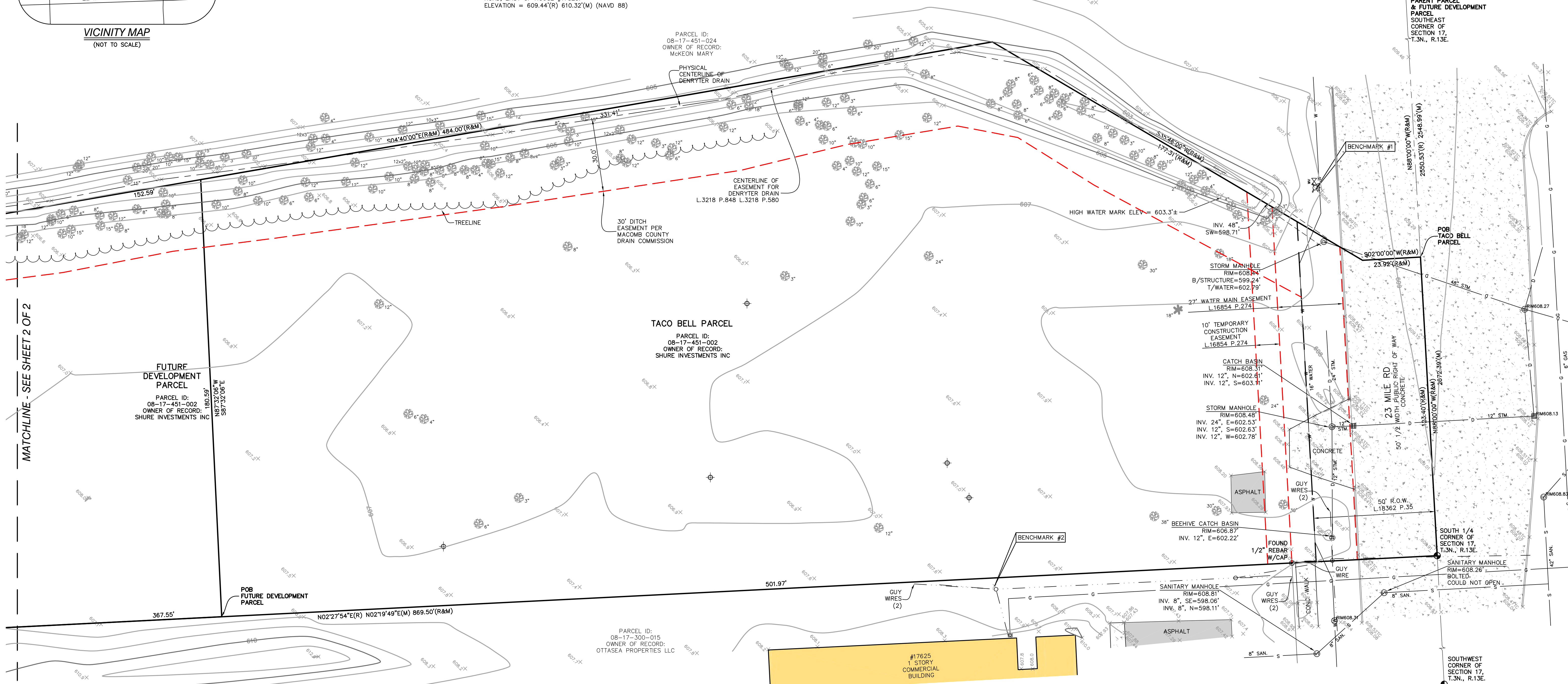
5. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO THE BOARD OF COUNTY ROAD COMMISSIONERS FOR THE COUNTY OF MACOMB, RECORDED IN LIBER 18362, PAGE 35, (AS SHOWN)



GRAPHIC SCALE



( IN FEET )  
1 inch = 20 ft.



MATCHLINE - SEE SHEET 2 OF 2

**LEGEND**

●	FOUND MONUMENT (AS NOTED)	---	EASEMENT (AS NOTED)
⊙	FOUND SECTION CORNER (AS NOTED)	---	EASEMENT CENTERLINE
(R&M)	RECORD AND MEASURED DIMENSION	---	RIGHT-OF-WAY
(R)	RECORD DIMENSION	---	BUILDING
(M)	MEASURED DIMENSION	---	CONCRETE CURB
○	GROUND ELEVATION	---	EDGE OF CONCRETE (CONC.)
○	UTILITY POLE	---	EDGE OF ASPHALT (ASPH.)
○	GAS METER	---	TREE / BRUSH LINE (AS NOTED)
○	SANITARY MANHOLE	---	OVERHEAD UTILITY LINE
○	ROUND CATCH BASIN	---	GAS LINE
○	SQUARE CATCH BASIN	---	SANITARY LINE
○	STORM DRAIN MANHOLE	---	STORM LINE
○	FIRE HYDRANT	---	WATER LINE
○	WATER GATE MANHOLE	---	UNDERGROUND PIPE (AS NOTED)
○	WATER VALVE	---	MINOR CONTOUR LINE
○	SOIL BORING	---	MAJOR CONTOUR LINE
○	DECIDUOUS TREE (AS NOTED)	---	BUILDING AREA
○	CONIFEROUS TREE (AS NOTED)	---	ASPHALT
---	PARCEL BOUNDARY LINE	---	CONCRETE
---	ADJOINER PARCEL LINE		
---	SECTION LINE		

**PROPERTY DESCRIPTION**

**PARENT PARCEL:**  
LAND SITUATED IN THE TOWNSHIP OF MACOMB, COUNTY OF MACOMB, STATE OF MICHIGAN, AND DESCRIBED AS:  
A PARCEL OF LAND LOCATED IN AND BEING PART OF THE SOUTHEAST 1/4 OF SECTION 17, TOWN 3 NORTH, RANGE 13 EAST, MACOMB TOWNSHIP, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT A POINT 2550.53 FEET NORTH 88 DEGREES 00 MINUTES WEST OF THE SOUTHEAST CORNER OF SAID SECTION 17; THENCE EXTENDING NORTH 88 DEGREES 00 MINUTES WEST 123.40 FEET ALONG THE SOUTHERLY LINE OF SAID SECTION 17; THENCE NORTH 02 DEGREES 27 MINUTES 54 SECONDS EAST 869.50 FEET; THENCE ALONG THE CENTER LINE OF A DRAIN, THE FOLLOWING COURSES AND DISTANCES: SOUTH 51 DEGREES 29 MINUTES EAST 82.60 FEET; THENCE SOUTH 26 DEGREES 39 MINUTES EAST 191.76 FEET; THENCE SOUTH 04 DEGREES 40 MINUTES EAST 484.00 FEET; THENCE SOUTH 35 DEGREES 46 MINUTES WEST 177.31 FEET; THENCE SOUTH 02 DEGREES 00 MINUTES WEST 23.92 FEET TO THE POINT OF BEGINNING.

**TACO BELL PARCEL:**  
LAND SITUATED IN THE TOWNSHIP OF MACOMB, COUNTY OF MACOMB, STATE OF MICHIGAN, AND DESCRIBED AS:  
A PARCEL OF LAND LOCATED IN AND BEING PART OF THE SOUTHEAST 1/4 OF SECTION 17, TOWN 3 NORTH, RANGE 13 EAST, MACOMB TOWNSHIP, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT A POINT 2549.99 FEET NORTH 88 DEGREES 00 MINUTES WEST OF THE SOUTHEAST CORNER OF SAID SECTION 17; THENCE EXTENDING NORTH 88 DEGREES 00 MINUTES WEST 123.40 FEET ALONG THE SOUTHERLY LINE OF SAID SECTION 17; THENCE NORTH 02 DEGREES 19 MINUTES 49 SECONDS EAST 501.97 FEET; THENCE SOUTH 87 DEGREES 32 MINUTES 06 SECONDS EAST 180.59 FEET; THENCE ALONG THE CENTER LINE OF A DRAIN, THE FOLLOWING 2 COURSES AND DISTANCES: SOUTH 04 DEGREES 40 MINUTES EAST 331.41 FEET; THENCE SOUTH 35 DEGREES 46 MINUTES WEST 177.31 FEET; THENCE SOUTH 02 DEGREES 00 MINUTES WEST 23.92 FEET TO THE POINT OF BEGINNING.

**FUTURE DEVELOPMENT PARCEL:**  
LAND SITUATED IN THE TOWNSHIP OF MACOMB, COUNTY OF MACOMB, STATE OF MICHIGAN, AND DESCRIBED AS:  
A PARCEL OF LAND LOCATED IN AND BEING PART OF THE SOUTHEAST 1/4 OF SECTION 17, TOWN 3 NORTH, RANGE 13 EAST, MACOMB TOWNSHIP, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT A POINT 2672.39 FEET NORTH 88 DEGREES 00 MINUTES WEST AND 501.97 FEET NORTH 02 DEGREES 19 MINUTES 49 SECONDS EAST OF THE SOUTHEAST CORNER OF SAID SECTION 17; THENCE EXTENDING NORTH 02 DEGREES 19 MINUTES 49 SECONDS EAST 367.55 FEET; THENCE ALONG THE CENTER LINE OF A DRAIN, THE FOLLOWING 3 COURSES AND DISTANCES: SOUTH 52 DEGREES 27 MINUTES 07 SECONDS EAST 84.57 FEET; THENCE SOUTH 26 DEGREES 39 MINUTES EAST 191.76 FEET; THENCE SOUTH 04 DEGREES 40 MINUTES EAST 152.59 FEET; THENCE NORTH 87 DEGREES 32 MINUTES 06 SECONDS WEST 180.59 FEET TO THE POINT OF BEGINNING.

**SURVEYOR'S CERTIFICATION**

TO CHICAGO TITLE INSURANCE COMPANY; CHICAGO TITLE OF MICHIGAN, INC.; TACO BELL OF AMERICA, LLC, A DELAWARE LIMITED LIABILITY COMPANY; 42 LINCOLN PARK, LLC; 42 MACOMB, LLC; ATA NATIONAL TITLE GROUP; STEWART TITLE GUARANTY COMPANY; AND GPD GROUP - ATLANTA:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 4, 5, 7A, 8, 9, 11A, AND 11B OF TABLE A, THEREOF. THE FIELD WORK WAS COMPLETED ON 10/26/21.

DATE OF PLAT OR MAP: 10/28/21

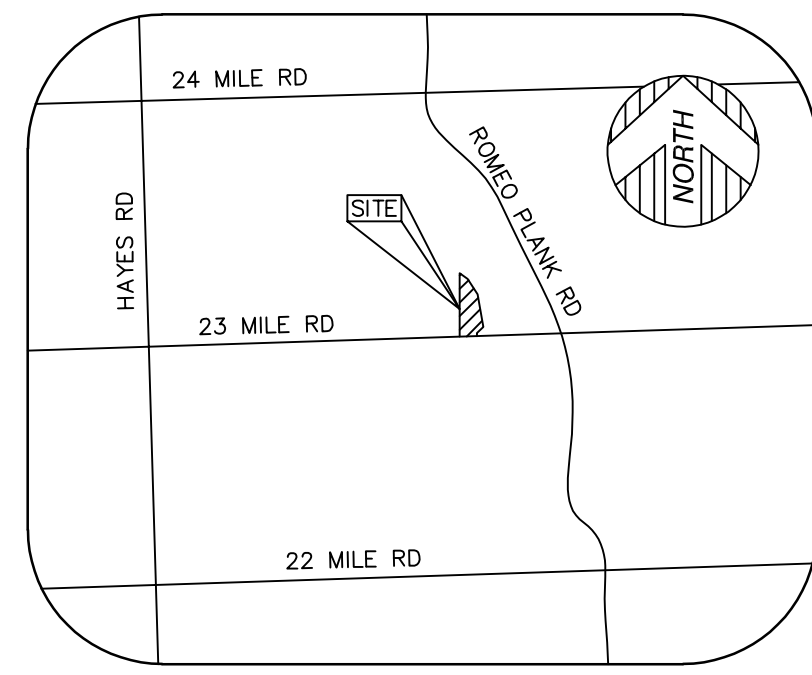
ANTHONY T. SYCKO, JR., P.S.  
PROFESSIONAL SURVEYOR  
MICHIGAN LICENSE NO. 47976  
22556 GRATIOT AVE., EASTPOINTE, MI 48021  
TSycko@kemtec-survey.com

ALTA / NSPS LAND TITLE SURVEY  
PREPARED FOR: GPD GROUP - ATLANTA  
17669 23 MILE RD, MACOMB, MICHIGAN,  
PART OF SECTION 17,  
TOWN 3 NORTH, RANGE 13 EAST

REVISED PER REVIEW COMMENTS	DATE	BY	DESCRIPTION
ADD HIGH WATER MARK ELEVATION	10/28/21	MRJ	
EDITED SURVEYOR'S CERTIFICATION	10/28/21	ATS	
ADDED SPLIT AND ADDITIONAL TREES	05/26/22	JV	
ADDITIONAL TOPO	01/26/22	JOM	
	11/24/21	MRJ	

10/28/21	MRJ	1" = 20'
10/28/21	ATS	
OCTOBER 28, 2021		
21-03169		

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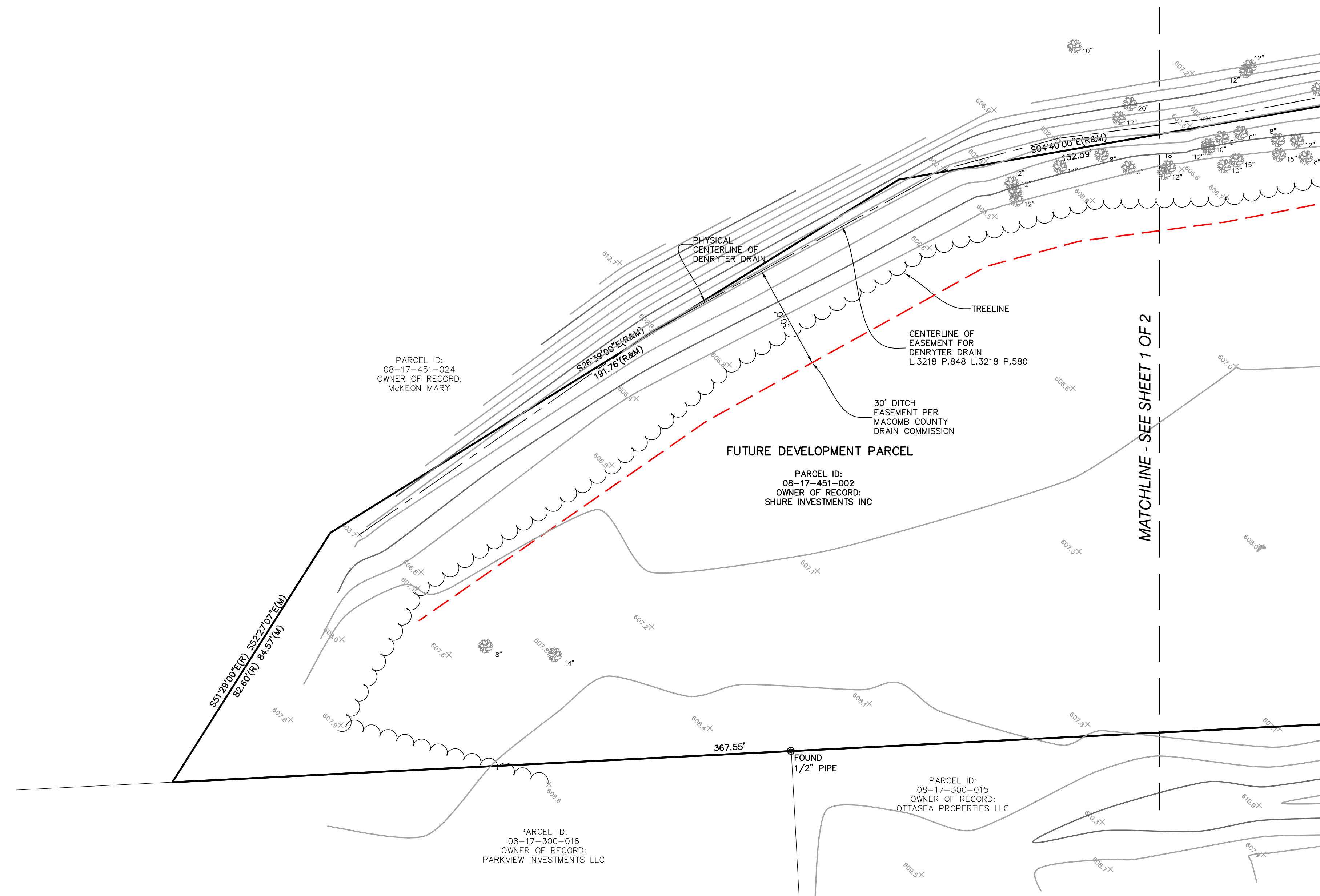
VICINITY MAP  
(NOT TO SCALE)



GRAPHIC SCALE



( IN FEET )  
1 inch = 20 ft.



LEGEND

●	FOUND MONUMENT (AS NOTED)	---	EASEMENT (AS NOTED)
●	FOUND SECTION CORNER (AS NOTED)	---	EASEMENT CENTERLINE
(R&M)	RECORD AND MEASURED DIMENSION	---	RIGHT-OF-WAY
(R)	RECORD DIMENSION	---	BUILDING
(M)	MEASURED DIMENSION	---	CONCRETE CURB
X 0.00	GROUND ELEVATION	---	EDGE OF CONCRETE (CONC.)
○	UTILITY POLE	---	EDGE OF ASPHALT (ASPH.)
○	GAS METER	---	TREE / BRUSH LINE (AS NOTED)
○	SANITARY MANHOLE	---	OVERHEAD UTILITY LINE
○	ROUND CATCH BASIN	---	GAS LINE
○	SQUARE CATCH BASIN	---	SANITARY LINE
○	STORM DRAIN MANHOLE	---	STORM LINE
○	FIRE HYDRANT	---	WATER LINE
○	WATER GATE MANHOLE	---	UNDERGROUND PIPE (AS NOTED)
○	WATER VALVE	---	MINOR CONTOUR LINE
○	SOIL BORING	---	MAJOR CONTOUR LINE
○	DECIDUOUS TREE (AS NOTED)	---	BUILDING AREA
○	CONIFEROUS TREE (AS NOTED)	---	ASPHALT
---	PARCEL BOUNDARY LINE	---	CONCRETE
---	ADJOINER PARCEL LINE	---	
---	SECTION LINE	---	

ALTA / NSPS LAND TITLE SURVEY  
 PREPARED FOR: GPD GROUP - ATLANTA  
 17669 23 MILE RD, MACOMB, MICHIGAN,  
 PART OF SECTION 17,  
 TOWN 3 NORTH, RANGE 13 EAST

REVISION	DATE	BY	DESCRIPTION
5	07/26/22	MRJ	REVISED PER REVIEW COMMENTS
4	07/12/22	ATS	ADD HIGH WATER MARK ELEVATION
3	05/26/22	JV	EDITED SURVEYOR'S CERTIFICATION
2	01/26/22	JDM	ADDED SPLIT AND ADDITIONAL TREES
1	11/24/21	MRJ	ADDITIONAL TOPO

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 www.kemtecgroupofcompanies.com

**DEMOLITION NOTES**

- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY DEMOLITION PROCESS. CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS INCLUDING BUT NOT LIMITED TO: MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC. THESE ACTIVITIES WILL REQUIRE SPECIFIC CURRENT STATES EPA OR LOCAL GOVERNING AUTHORITIES AIR PERMITS FOR INSTALLATION AND OPERATION. CONTRACTORS MUST SEEK AUTHORIZATION FROM THE CORRESPONDING GOVERNING BODIES. FOR DEMOLITION OF ALL COMMERCIAL SITES, A NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO THE CURRENT STATES EPA AND LOCAL GOVERNING AUTHORITIES TO DETERMINE ANY CORRECTIVE ACTIONS THAT MAY BE REQUIRED.
- DEMOLITION INCLUDES THE FOLLOWING:
  - TRANSFER BENCHMARK CONTROL TO NEW LOCATIONS OUTSIDE THE DISTURBED AREA PRIOR TO COMMENCING DEMOLITION OPERATIONS (WHEN APPLICABLE).
  - DEMOLITION AND REMOVAL OF SITE IMPROVEMENTS NECESSARY FOR THE PROPOSED CONSTRUCTION OF NEW IMPROVEMENTS.
  - REROUTING, RELOCATING, DISCONNECTING, CAPPING OR SEALING, AND ABANDONING/REMOVING SITE UTILITIES IN PLACE (WHICHEVER IS APPLICABLE).
- REMOVE AND LEGALLY DISPOSE OF ITEMS CALLED OUT TO BE REMOVED. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS. THOSE ITEMS INDICATED TO BE REINSTALLED, SALVAGED, OR TO REMAIN SHALL BE CLEANED, SERVICED, AND OTHERWISE PREPARED FOR REUSE. CONTRACTOR TO STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN LOCATIONS INDICATED.
- PROTECT ITEMS INDICATED TO REMAIN AGAINST DAMAGE AND SOLING THROUGHOUT CONSTRUCTION. WHEN PERMITTED BY THE CONSTRUCTION MANAGER OR OWNER, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION THROUGHOUT CONSTRUCTION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS. PROMPTLY REPAIR DAMAGES TO ADJACENT FACILITIES CAUSED BY DEMOLITION OPERATIONS AT THE CONTRACTORS COST.
- CONTRACTOR SHALL SCHEDULE DEMOLITION ACTIVITIES WITH THE CONSTRUCTION PROJECT MANAGER INCLUDING THE FOLLOWING:
  - DETAILED SEQUENCE OF DEMOLITION AND REMOVAL WORK, WITH STARTING AND ENDING DATES FOR EACH ACTIVITY.
  - DATES FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES.
  - IDENTIFY AND ACCURATELY LOCATE UTILITIES AND OTHER SUBSURFACE STRUCTURAL, ELECTRICAL, OR MECHANICAL CONDITIONS.
- REGULATORY REQUIREMENTS: COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE STARTING DEMOLITION. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION
- MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE THROUGHOUT CONSTRUCTION OPERATIONS.
  - DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR OPERATING FACILITIES. EXCEPT WHEN AUTHORIZED IN WRITING BY OWNERS REPRESENTATIVE AND AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO OWNER AND TO GOVERNING AUTHORITIES.
- LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITY SERVICES SERVING THE SITE. ARRANGE TO SHUT OFF AND CAP UTILITIES WITH UTILITY COMPANIES AND FOLLOW THEIR RESPECTIVE UTILITY KILL AND CAP POLICIES. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING BY THE UTILITY COMPANY.
- CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA. SAFE PASSAGE INCLUDES THE ERECTION OF TEMPORARY PROTECTION AND/OR BARRICADES AS PER LOCAL GOVERNING AUTHORITIES AND IN ACCORDANCE WITH THE CURRENT ADA REGULATIONS. USE OF EXPLOSIVES WILL NOT BE PERMITTED.
- CLEAN ADJACENT BUILDINGS AND IMPROVEMENT OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
- PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE WILL NOT BE PERMITTED. NO BURNING OF ANY MATERIALS ON SITE SHALL BE PERMITTED.
- IT IS NOT EXPECTED THAT ASBESTOS WILL BE ENCOUNTERED IN THE COURSE OF THIS CONTRACT. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER AND THE OWNER.
- SURVEY THE CONDITION OF THE STRUCTURE TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN A STRUCTURAL DEFICIENCY OR UNPLANNED COLLAPSE OF ANY PORTION OF THE STRUCTURE OR ADJACENT STRUCTURES THROUGHOUT CONSTRUCTION.
- DEMOLISH BUILDING AND STRUCTURAL PADS COMPLETELY AND REMOVE FROM THE SITE. USE METHODS REQUIRED TO COMPLETE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS AND AS FOLLOWS:
  - DISPOSE OF DEMOLISHED ITEMS AND MATERIALS PROMPTLY.
  - DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS.
  - BREAK UP AND REMOVE CONCRETE SLABS ON GRADE.
- BELOW-GRADE DEMOLITION: DEMOLISH FOUNDATION WALLS, PAVEMENTS, AND OTHER BELOW-GRADE DEMOLITION, AS FOLLOWS:
  - COMPLETELY REMOVE BELOW-GRADE DEMOLITION, INCLUDING FOUNDATION WALLS FOOTINGS, KNOWN AND UNKNOWN PAVEMENT SECTIONS INCLUDING UNDERLYING CONCRETE SLABS, AND OTHER BELOW GRADE CONCRETE SLABS FOUND DURING DEMOLITION (INCLUDING ITEMS WHICH MAY NOT BE IDENTIFIED HEREIN).
- FILLING BELOW-GRADE AREAS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF BUILDINGS, PAVEMENTS, AND OTHER REMOVED ITEMS WITH SOIL MATERIALS ACCORDING TO REQUIREMENTS PER SOILS REPORT AND ON-SITE GEOTECHNICAL ENGINEER'S REPRESENTATIVE. CONTRACTOR SHALL CONTACT GEOTECHNICAL ENGINEER PRIOR TO FILLING ANY AREAS TO OBSERVE FILL PROCEDURES.
- CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERNING REGULATIONS.
- CONTRACTOR TO WET SAWCUT EXISTING PAVEMENT TO REMAIN AT NEXT NEAREST JOINT PRIOR TO REMOVALS OF CURB, GUTTER, PAVEMENT, ETC.
- THE CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS WITH SMALL HANDHELD GRINDERS OR SCARIFIERS OR OTHER METHODS. WITH THE APPROVAL OF THE CONSTRUCTION MANAGER, TAKE CARE DURING MARKING REMOVAL NOT TO SCAR, DISCOLOR, OR OTHERWISE DAMAGE THE PAVEMENT SURFACE. DO NOT OVERPAINT OR USE OTHER METHODS OF COVERING MARKINGS INSTEAD OF REMOVAL.
- IF UNDERGROUND TANKAGE IS CALLED FOR DEMOLITION, THE CONTRACTOR SHALL COORDINATE REMOVAL AND REPLACEMENT WITH THE STATE BUREAU OF UNDERGROUND STORAGE TANK REGULATIONS (BUSTR). UNDERGROUND TANK REMOVAL SHALL ALSO INCLUDE THE REMOVAL OF ANY MONITORING WELLS, OIL/GAS WELLS, AND MINE SHAFTS, IN ACCORDANCE WITH GOVERNING AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL FULLY SECURE WORK AREA WITH THE APPROPRIATE SIGNAGE, FENCING, AND BARRICADES WHICH ACCOMMODATE VISUALLY IMPAIRED PERSONS AS AGREED UPON WITH SITE CONSTRUCTION PROJECT MANAGER AND OWNER TO WARN AND KEEP PEOPLE OUT OF THE SITE WORK AREA FOR THE DURATION OF THE PROJECT.

**GENERAL PLAN AND SURVEY NOTES**

- PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE SECTION OF THESE NOTES ENTITLED "GRADING PLAN NOTES" FOR DEFINITIONS AS MAY BE NECESSARY FOR "GEOTECHNICAL ENGINEER" AND "SOILS REPORT".
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION PROJECT MANAGER OF ANY DISCREPANCY BETWEEN SOILS REPORT AND PLANS, ETC.
- THE CONTRACTOR SHALL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL EXPLORATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY TO PERMIT VERIFICATION OF THE CONDITIONS AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLAN AND SPECIFICATIONS AND DISCLOSED BY THE SOIL STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING AS REQUIRED ABOVE, OF SUCH DIFFERING CONDITIONS.
- ALL WORK WITHIN THE RIGHTS OF WAY SHALL BE IN ACCORDANCE WITH THE GOVERNING JURISDICTION AND SPECIFICATIONS.
- CONTRACTOR SHALL COORDINATE ANY MAINTENANCE OF TRAFFIC WITH THE OWNERS REPRESENTATIVE AND THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL AT ALL TIMES ENSURE THAT SWPP MEASURES PROTECTING EXISTING DRAINAGE FACILITIES BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY PHASE OF THE SITE CONSTRUCTION OR LAND ALTERATION. (SEE SWPP PLANS).
- ALL WORK SHALL BE COMPLETED IN A NEAT AND ORDERLY MANNER REMOVING ALL EXCESS MATERIAL AND WASTE FROM THE SITE INCLUDING TIMELY REMOVAL OF ANY CONCRETE SPLATTER. UPON COMPLETION OF PROJECT, CONTRACTOR SHALL CLEAN THE PAVED AREAS PRIOR TO REMOVAL OF TEMPORARY SEDIMENT CONTROLS. AS DIRECTED BY THE CITY AND/OR CONSTRUCTION PROJECT MANAGER, IF POWER WASHING IS USED, NO SEDIMENT LADEN WATER SHALL BE WASHED INTO THE STORM SYSTEM. ALL SEDIMENT LADEN MATERIAL ON PAVEMENT OR WITHIN THE STORM SYSTEM SHALL BE COLLECTED AND REMOVED FROM THE SITE AT CONTRACTOR'S EXPENSE (SEE SWPP PLANS).
- THESE PROJECT CONSTRUCTION DOCUMENTS SHALL NOT CONSTITUTE A CONTRACTUAL RELATIONSHIP BETWEEN GPD GROUP PROFESSIONAL CORPORATION AND THE CONTRACTOR / SUBCONTRACTOR / OR OTHER AFFILIATED PARTIES.
- THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION OR SAFETY, MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES UTILIZED IN CONSTRUCTION BY THE CONTRACTOR OR SUBCONTRACTORS. ANY SEQUENCING OR SUGGESTED NOTATIONS WHICH MAY APPEAR IN THE PLANS IS INTENDED TO ASSIST IN THE UNDERSTANDING OF PROJECT INTENT.
- DETAILS, NOTES, AND OTHER REFERENCES CONTAIN HEREIN MAY HAVE BEEN OBTAINED FROM OUTSIDE REFERENCE SOURCE LOCATIONS SUCH AS, BUT NOT LIMITED TO, LOCAL AUTHORITY AGENCIES, DESIGN REFERENCE MANUALS, MANUFACTURER'S RECOMMENDED DOCUMENTATION, OR OTHER INDUSTRY SOURCES. GPD DOES NOT WARRANT INFORMATION OR REPRESENTATION OF SAID CONTENT CONTAINED HEREIN. IT IS SHOWN SOLELY FOR REFERENCE ONLY OF DESIGN INTENT AT THE TIME OF PLAN PREPARATION. THE CONSTRUCTION TEAM MEMBERS (CONTRACTOR AND CONSTRUCTION MANAGER, WHERE APPLICABLE) SHALL OBTAIN THE MOST CURRENT DETAILED INFORMATION FROM THE RESPECTIVE SOURCE TO CONSTRUCT THE IMPROVEMENTS UNDER THE AUTHORITY OF THE RESPECTIVE GOVERNING AGENCIES. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN THE ORIGINAL DESIGN INTENT AND THE CONSTRUCTION TEAM OBTAINED REFERENCE MATERIAL, THE CONSTRUCTION MANAGER OR THE PROJECT'S CONTACT PERSON SHALL BE NOTIFIED PRIOR TO COMMENCING OF ASSOCIATED WORK.
- CONDUCT CONSTRUCTION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS.
- THE A.L.T.A. / NSPS LAND TITLE SURVEY BY KEM-TEC, DATED 10/28/2021 SHALL BE CONSIDERED A PART OF THESE PLANS. THE G.C. IS RESPONSIBLE FOR LOCATING IMPROVEMENTS PER THESE PLANS.
- THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE BASED ON THE A.L.T.A. / NSPS LAND TITLE SURVEY. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO BECOME FAMILIAR WITH THE SITE'S POSSIBLE BELOW GRADE FEATURES, INCLUDING BUT NOT LIMITED TO, ROOMS, VAULTS, UTILITIES, ETC. AND SHALL CONDUCT A WALK THROUGH WITH THE OWNERS REPRESENTATIVE. CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR REPAIR TO DAMAGE CAUSED BY THEIR WORK FORCE TO FACILITIES WHICH ARE NOT INTENDED TO BE DISTURBED.
- ALL DIMENSIONS, GRADES, AND UTILITY LOCATIONS SHOWN ON THESE PLANS WERE BASED ON THE SURVEY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION PROJECT MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO INFORMATION SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- IN SOME CASES, THE DEVELOPER OR OWNER MAY HAVE PROVIDED THEIR OVERALL DEVELOPMENT PLANS FOR THE PROJECT DESIGN RATHER THAN A FIELD SURVEY. (SEE SITE PLAN FOR NOTES WHEN THIS IS THE CASE). ALL DIMENSIONS, GRADES, AND UTILITY LOCATIONS SHOWN ON THESE PLANS WERE BASED ON AN ALTA SURVEY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO INFORMATION SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- THE CONTRACTOR SHALL RUN AN INDEPENDENT VERTICAL CONTROL TRAVERSE TO CHECK BENCHMARKS AND A HORIZONTAL CONTROL TRAVERSE THROUGH THE REFERENCED PROJECT CONTROL DATUM TO CONFIRM GEOMETRIC DATA. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.

**GRADING PLAN NOTES**

- A GEOTECHNICAL REPORT HAS BEEN PREPARED BY PSI, DATED 11/10/2021 AND SHALL BE CONSIDERED TO BE A PART OF THIS PLAN SET.
- BEFORE STARTING GRADING OPERATIONS, SEE STORMWATER POLLUTION PREVENTION PLAN, NOTES AND DETAILS (SWPP) LANDSCAPE PLAN AND SOILS REPORT FOR TREATMENT OF EXISTING GRADE.
- PRIOR TO SITE CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL INSTALL ALL SWPP MEASURES TO PROTECT EXISTING DRAINAGE FACILITIES. CONTRACTOR SHALL PREVENT SILTATION FROM LEAVING THE SITE AT ALL TIMES.
- STRIP BUILDING AND PAVEMENT AREAS OF ALL ORGANIC TOPSOILS, STOCKPILE SUITABLE TOPSOILS FOR RESPREADING ON TO LANDSCAPE AREAS. ALL EXCESS EXCAVATED MATERIALS SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE. SEE GEOTECHNICAL REPORT FOR STRIPPING AND TOPSOIL REQUIREMENTS.
- OBTAIN APPROVED BORROW SOIL MATERIALS OFF-SITE WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE ON-SITE.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. UNLESS OTHERWISE SPECIFIED IN THE PLANS, SPECIFICATIONS, OR GEOTECHNICAL REPORT THE SITE GRADING, EXCAVATION, AND EMBANKMENT SHALL BE IN ACCORDANCE WITH THE STATE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. SITE SHALL BE GRADED AND LAND BALANCED.
- AT A MINIMUM ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY PER A.S.T.M. TEST D-698. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 2% BELOW OPTIMUM. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND RETAIN A QUALIFIED SOILS ENGINEER REGISTERED WITHIN THE STATE TO ENSURE COMPLIANCE WITH THE GEOTECHNICAL REPORT. MAKE GEOTECHNICAL RECOMMENDATIONS BASED ON FIELD CONDITIONS, AND ENSURE THAT ALL SHORING AND DEWATERING MEANS AND METHODS WILL NOT COMPROMISE THE STABILITY OF EXISTING OR PROPOSED FOOTINGS/FOUNDATIONS. THE OWNER SHALL RECEIVE ALL COMPACTION REPORTS PREPARED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. NOTIFY PROJECT CONSTRUCTION MANAGER IF ANY UNSUITABLE SOILS ARE FOUND.
- FOLLOWING GRADING OF SUBSOIL TO SUBGRADE ELEVATIONS THE CONTRACTOR SHALL PLACE TOPSOIL TO A 6" DEPTH (UNLESS OTHERWISE SPECIFIED IN LANDSCAPING DETAILS) IN ALL DISTURBED AREAS WHICH ARE NOT TO BE PAVED. SMOOTHLY FINISH GRADE TO MEET SURROUNDING LAWN AREAS AND ENSURE POSITIVE DRAINAGE. STOCKPILED TOPSOIL SHALL BE SCREENED PRIOR TO RESPREADING. TOPSOIL SHALL BE FREE OF SUBSOIL, DEBRIS, BRUSH AND STONES LARGER THAN 1" IN ANY DIMENSION. ROCK HOUNDING IN PLACE WILL NOT BE PERMITTED. ALL EXCESS TOPSOIL SHALL BE LEGALLY DISPOSED OF OFF SITE.
- ELEVATIONS GIVEN ARE AT BOTTOM FACE OF CURB AND/OR FINISHED PAVEMENT GRADE UNLESS OTHERWISE SPECIFIED ON GRADING PLAN. ALL PAVEMENT SHALL BE LAID ON A STRAIGHT, EVEN, AND UNIFORM GRADE WITH A MINIMUM OF 1% SLOPE TOWARD THE COLLECTION POINTS UNLESS OTHERWISE SPECIFIED ON THE GRADING PLAN. DO NOT ALLOW NEGATIVE GRADES OR PONDING OF WATER.
- SLOPE BUILDING SIDEWALK AWAY FROM THE BUILDING AT A MAXIMUM OF 1.5% (UNLESS OTHERWISE INDICATED ON THE GRADING PLAN).
- WHEN CONSTRUCTING ASPHALTIC CONCRETE PAVEMENTS, CONTRACTOR SHALL PROVIDE BUTT END JOINT TO MEET EXISTING PAVEMENT IN ELEVATION AT DRIVE RETURNS AND ENSURE POSITIVE DRAINAGE.

**GENERAL UTILITY NOTES**

- CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES IMMEDIATELY AFTER BID IS AWARDED AND ENSURE THE UTILITY COMPANIES HAVE THE ESSENTIALS REQUIRED FOR COMPLETE SERVICE INSTALLATION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER OF ANY TIME FRAMES ESTABLISHED BY UTILITY COMPANIES WHICH WILL NOT MEET OPENING DATE.
- CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, INVERT ELEVATION, AND CONDITION OF EXISTING UTILITIES WHICH ARE INTENDED TO BE UTILIZED AS A CONNECTION POINT FOR ALL PROPOSED UTILITIES PRIOR TO ANY CONSTRUCTION. CONTRACTOR TO ENSURE EXISTING UTILITIES ARE IN GOOD CONDITION AND FREE FLOWING (IF APPLICABLE). IF ELEVATIONS, SIZE, OR LOCATION DIFFER FROM WHAT IS SHOWN ON PLANS, CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY.
- WHERE PLANS PROVIDE FOR PROPOSED WORK TO BE CONNECTED TO, OR CROSS OVER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING THE PROPOSED WORK. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE RESULTS IN A CHANGE IN THE PLAN, THE CONSTRUCTION MANAGER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED WORK WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY. PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT ITEM.
- UTILITY SERVICE PROVIDERS RULES AND REQUIREMENTS TAKE PRECEDENCE OVER INFORMATION HEREIN. IF DISCREPANCY ARISES, CONTRACTOR SHALL FULLY COORDINATE WITH UTILITY SERVICE PROVIDER PRIOR TO START OF CONSTRUCTION.

**SANITARY SEWER NOTES**

- SANITARY SEWER LATERAL INVERT AT BUILDING SHALL BE A MINIMUM OF 5.0' BELOW FINISH FLOOR.
- CLEAN-OUTS TO BE INSTALLED AT ALL PIPE BENDS AND ANGLES, UNLESS A MANHOLE IS INDICATED.
- THE CONTRACTOR SHALL HIRE A LOCAL PLUMBER LICENSED WITH THE LOCAL SANITARY JURISDICTION TO MAKE ALL CONNECTIONS FROM THE BUILDING TO THE EXISTING SEWER. CONTRACTOR SHALL SECURE A SANITARY SEWER CONNECTION PERMIT PRIOR TO ANY CONSTRUCTION. THE CONTRACTORS PRICE FOR SANITARY SEWER INSTALLATION SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE LOCAL SANITARY JURISDICTION TO PROVIDE A COMPLETE WORKING SERVICE. COORDINATE ALL WORK WITH KEVIN JOHNSON @ MACOMB TOWNSHIP DEPARTMENT OF PUBLIC WORKS @ 586.598.0687.
- ALL SANITARY PIPE MATERIAL SHALL BE 6" PVC SCHEDULE 40 CONFORMING TO ASTM D 1785, WITH GLUED UNLESS OTHERWISE REQUIRED BY THE LOCAL JURISDICTION (OR APPROVED EQUAL).

**STORM SEWER NOTES**

- ALL STORM SEWER PIPE 12" OR GREATER IN DIAMETER SHALL BE CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) SMOOTH INTERIOR PIPE (UNLESS OTHERWISE NOTED ON PLAN). HDPE PIPE SHALL CONFORM TO ASTM D 3550 AND JOINTS PER ASTM F477. STORM SEWER LESS THAN 12" IN DIAMETER SHALL BE PVC SCHEDULE 40 CONFORMING TO ASTM D 1785, WITH GLUED UNLESS OTHERWISE REQUIRED BY THE LOCAL JURISDICTION (OR APPROVED EQUAL).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BACKFILLING AND PIPE INSTALLATION, PIPE MATERIAL AND TAP CONNECTION. COORDINATE ALL WORK WITH DARYL GAPSHES @ 586-468-6343 @ MACOMB COUNTY DRAIN COMMISSION (PUBLIC WORKS).

**WATER NOTES**

- WATER SERVICE MATERIALS SHALL BE HDPE SDR 9. DIAMETER SHALL BE AS NOTED ON THESE PLANS AND SHALL BE INSTALLED WITH A MINIMUM COVER OF 5.0' OR BELOW FROST LINE, WHICHEVER IS GREATER.
- MATERIALS PROVIDED BY THE WATER COMPANY:
  - FURNISH WATER METER.
  - COORDINATE ALL WORK WITH KEVIN JOHNSON OF MACOMB TOWNSHIP DEPARTMENT OF PUBLIC WORKS @ 586.598.0687.
- CONSTRUCTION AND MATERIALS PROVIDED BY THE CONTRACTOR:
  - TAP SERVICE LINE AND INSTALL SERVICE LINE FROM TAP TO BUILDING.
  - INSTALL CURB STOP.
  - ALL TRENCHING AND BACKFILLING.
  - INSTALLING METER.
- CONTRACTOR SHALL PROVIDE 100% IRRIGATION PER CONSTRUCTION PROJECT MANAGER AND TOWNSHIP REQUIREMENTS. COORDINATE SLEEVE LOCATIONS WITH THE CONSTRUCTION PROJECT MANAGER AND IRRIGATION CONSULTANT PRIOR TO PAVEMENT AND CURB INSTALLATION.

**EXISTING GENERAL LEGEND**

	FOUND MONUMENT (AS NOTED)
	FOUND SECTION CORNER (AS NOTED)
	RECORD AND MEASURED DIMENSION
	RECORD DIMENSION
	MEASURED DIMENSION
	GROUND ELEVATION
	UTILITY POLE
	GAS METER
	SANITARY MANHOLE
	ROUND CATCH BASIN
	SQUARE CATCH BASIN
	STORM DRAIN MANHOLE
	FIRE HYDRANT
	WATER GATE MANHOLE
	WATER VALVE
	SOIL BORING
	DECIDUOUS TREE (AS NOTED)
	CONIFEROUS TREE (AS NOTED)
	PARCEL BOUNDARY LINE
	ADJOINER PARCEL LINE
	SECTION LINE
	EASEMENT (AS NOTED)
	EASEMENT CENTERLINE
	RIGHT-OF-WAY
	BUILDING
	CONCRETE CURB
	EDGE OF CONCRETE (CONC.)
	EDGE OF ASPHALT (ASPH.)
	TREE / BRUSH LINE (AS NOTED)
	OVERHEAD UTILITY LINE
	GAS LINE
	SANITARY LINE
	STORM LINE
	WATER LINE
	UNDERGROUND PIPE (AS NOTED)
	MINOR CONTOUR LINE
	MAJOR CONTOUR LINE
	BUILDING AREA
	ASPHALT
	CONCRETE

**PROPOSED GENERAL LEGEND**

	PROPOSED CATCH BASIN
	PROPOSED CLEAN OUT
	PROPOSED EXTERIOR GREASE INTERCEPTOR
	PROPOSED ELECTRIC TRANSFORMER
	PROPOSED LIGHT POLE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED CURB & GUTTER
	PROPOSED TRAFFIC SIGN
	PROPOSED PAINTED ADA SYMBOL
	PROPOSED DIRECTIONAL PAVEMENT MARKINGS
	PROPOSED TRANSVERSE STRIPING
	PROPOSED CROSSWALK STRIPING
	PROPOSED CONCRETE
	PROPOSED STANDARD DUTY ASPHALT
	PROPOSED HEAVY DUTY ASPHALT



DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
 BUILDING TYPE: END. MED20  
 PLAN VERSION: MARCH 2021  
 BRAND DESIGNER: DICKSON  
 SITE NUMBER: 315390  
 STORE NUMBER: 457226  
 PA/PM: SM  
 DRAWN BY: EA  
 JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
 Macomb, MI 48042



**ENDEAVOR 2.0**

**GENERAL NOTES**

**C-001**

PLOT DATE:

## GENERAL NOTES

- ALL WORK SPECIFIED AS A DEPARTMENT OF TRANSPORTATION ITEM SHALL BE GOVERNED BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AS WELL AS THE CURRENT EDITION OF THE LOCAL JURISDICTION STORM WATER MANAGEMENT MANUAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POSSESS AND TO BE FAMILIAR WITH APPLICABLE SECTIONS.
- THESE CONTRACT DRAWINGS SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST. IF UNFORESEEN STORM WATER POLLUTION IS ENCOUNTERED, ADDITIONAL STORM WATER POLLUTION PREVENTION (SWPP) MEASURES SHALL BE IMPLEMENTED TO MANAGE THE CURRENT SITE CONDITIONS WHICH MAY BE REQUESTED BY THE OWNER, COUNTY ENGINEER, PROJECT ENGINEER OR SOIL AND WATER CONSERVATION SERVICE REPRESENTATIVE AT ANYTIME. SUCH REQUESTS AND CHANGE IN SITE CONDITIONS SHALL BE IMPLEMENTED IMMEDIATELY AT CONTRACTOR'S EXPENSE.
- ALL STORM WATER POLLUTION PREVENTION PLAN (SWPP) PRACTICES SHALL BE INSTALLED BEFORE ANY OTHER EARTH MOVING OCCURS.
- SEDIMENT BARRIERS SHALL BE INSTALLED DOWNSLOPE OF DISTURBED AREAS. SEDIMENT BARRIERS SHALL BE INSTALLED ALONG LEVEL CONTOURS. MAXIMUM CONTRIBUTING DRAINAGE AREA TO SEDIMENT BARRIERS SHALL BE PER THE CURRENT STATE'S EPA OR THE LOCAL AUTHORITY REQUIREMENTS. COMPOSITE FILTER SOCKS USED IN LIEU OF SILT FENCE SHALL BE A MINIMUM OF 12 INCHES IN DIAMETER.
- SILT BARRIERS SHALL BE INSTALLED AROUND ALL EXISTING AND NEW STORM INLETS, CATCH BASINS AND YARD DRAINS. INSTALL ROCK CHECK DAMS FOR HEADWALL INLETS FOR STORM WATER POLLUTION PREVENTION.
- STORM WATER POLLUTION PREVENTION MEASURES SHALL BE INSTALLED AROUND ALL DIRT OR TOPSOIL STOCKPILES AND OTHER TEMPORARILY DISTURBED AREAS AS MAY BE SHOWN ON THESE PLANS AND/OR AS DIRECTED BY THE ENGINEER OR THE LOCAL AUTHORITY HAVING JURISDICTION.
- SILT BARRIERS, CONSTRUCTION ENTRANCES, AND SILT PERIMETER CONTROLS SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF GRASS HAS BEEN OBTAINED AND/OR PAVING OPERATIONS ARE COMPLETE. CONTRACTOR SHALL KEEP SILT FROM ENTERING ANY STORM DRAINAGE SYSTEM. ONCE SITE HAS BEEN COMPLETELY STABILIZED, ANY SILT IN PIPES AND DRAINAGE SWALES SHALL BE REMOVED WITHIN 10 DAYS.
- ALL EXISTING WATER COURSES WITHIN THE PROJECT LIMITS SHALL BE TEMPORARILY PROTECTED DURING LAND CLEARING AND GRADING OPERATIONS. SOILS WITHIN 50 FEET OF SAID WATER COURSES SHALL BE STABILIZED WITHIN 2 DAYS OF THE INITIAL CLEARING / GRADING OPERATION.
- CONSTRUCTION ENTRANCE SHALL BE UTILIZED. IF CONDITIONS ARE SUCH THAT MUD IS COLLECTING ON VEHICLE TIRES, THE TIRES MUST BE CLEANED BEFORE THE VEHICLES ENTER THE PUBLIC ROADWAY. THE SITE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOW OF MUD ONTO THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE ROADWAY MUST BE REMOVED PROMPTLY.
- IF FOR ANY REASON, THE PROJECT IS SUSPENDED, THE CONTRACTOR SHALL ENSURE THAT ALL INSTALLED EROSION MEASURES ARE FUNCTIONING AND PROPERLY MAINTAINED DURING THIS PERIOD, AND THAT ALL BARE SOILS ARE SEEDED AND MULCHED WITH TEMPORARY SEED MIXTURE.
- CONCRETE WASHOUT FACILITY (IF APPLICABLE) SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLAN DETAILS AND LOCAL GOVERNING AUTHORITY REGULATIONS AND INSTRUCTIONS.
- IMPLEMENTATION OF EROSION AND SEDIMENT CONTROLS SHALL CONFORM TO STATE OF MICHIGAN CONSTRUCTION GENERAL PERMIT AND THE TOWNSHIP OF MACOMB CODIFIED ORDINANCES. IF A CONFLICT EXISTS BETWEEN THE TWO REGARDING EROSION AND SEDIMENT CONTROL IMPLEMENTATION, THE MORE RESTRICTIVE SHALL APPLY.
- DISTURBED AREAS WITHIN 50' OF A STREAM SHALL HAVE PERMANENT STABILIZATION APPLIED WITHIN 2 DAYS OF FINAL GRADE.
- DISTURBED AREAS WHICH WILL REMAIN DORMANT FOR OVER 1 YEAR OR ARE AT FINAL GRADE SHALL HAVE PERMANENT STABILIZATION APPLIED WITHIN 7 DAYS OF LAST EARTHWORK DISTURBANCE.

## INSPECTION NOTES

- CONTRACTOR SHALL INSPECT ALL SWPP MEASURES DAILY AND LOGGED BY THE CONTRACTOR FOR INSPECTION. LOGGING SHALL BE WEEKLY AND AFTER EVERY 1/2" RAINFALL EVENT. REPAIR AS NECESSARY TO PREVENT EROSION. SILTATION SHALL BE REMOVED FROM AREAS WHERE FAILURES HAVE OCCURRED AND CORRECTIVE ACTION TAKEN WITHIN 24 HOURS TO MAINTAIN ALL SWPP.
- CONTRACTOR'S INSPECTOR SHALL BE A QUALIFIED INDIVIDUAL. ONLY A QUALIFIED INSPECTION PERSONNEL IS TO PERFORM THE INSPECTIONS. SITE INSPECTIONS SHALL BE DONE WEEKLY AND WITHIN 24 HRS AFTER EVERY RAINFALL EVENT EXCEEDING 1/2" OF RAINFALL. ALL NECESSARY REPAIRS SHOULD BE IMPLEMENTED IMMEDIATELY AFTER SUCH INSPECTIONS.
- CONTRACTOR'S INSPECTOR SHALL BE RESPONSIBLE FOR PREPARING AND SIGNING WEEKLY AND ALL INTERMEDIATE EROSION CONTROL INSPECTION REPORTS AFTER EVERY INSPECTION, WHICH INCLUDE BUT NOT LIMITED TO (DISTURBED AREAS, MATERIAL STORAGE AREAS, EROSION AND SEDIMENT CONTROLS, DISCHARGE LOCATIONS AND VEHICLE ENTRANCE/EXIT LOCATIONS). SUCH REPORTS SHALL BE MADE AVAILABLE TO OWNER, ENGINEER AND CITY / STATE OFFICIALS UPON THEIR REQUEST.
- REPORTS SHALL BE KEPT FOR 3 YEARS AFTER TERMINATION OF THE CONSTRUCTION ACTIVITIES.
- CONTRACTOR MAY SUBMIT A WAIVER REQUEST TO THE LOCAL AND STATE GOVERNING AUTHORITIES FOR A REDUCTION TO MONTHLY INSPECTIONS IF THE SITE WILL BE STABILIZED AND DORMANT FOR A LONG PERIOD, AND/OR THE RUNOFF IS UNLIKELY DUE TO WEATHER CONDITIONS FOR AN EXTENDED PERIOD OF TIME (FROZEN GROUND).
- FOR BMPS THAT REQUIRE REPAIR OR MAINTENANCE - NON SEDIMENT POND BMPS ARE TO BE REPAIRED WITHIN 3 DAYS OF INSPECTION AND SEDIMENT PONDS ARE TO BE REPAIRED OR CLEANED OUT WITHIN 10 DAYS OF INSPECTION.
- FOR BMPS THAT DO NOT MEET THE INTENDED FUNCTION, A NEW BMP SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.
- FOR MISSING BMPS REQUIRED, THE MISSING BMPS SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

## SPILLS AND CONTAMINATION

- CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION WASTES:
  - PREVENT SPILLS
  - USE PRODUCTS UP
  - FOLLOW LABEL DIRECTIONS FOR DISPOSAL
  - REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
  - RECYCLE WASTES WHENEVER POSSIBLE
  - DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND
  - DON'T POUR DOWN THE SINK, DOOR DRAIN OR SEPTIC TANKS
  - DON'T BURY CHEMICALS OR CONTAINERS
  - DON'T BURN CHEMICALS OR CONTAINERS
  - DON'T MIX CHEMICALS TOGETHER
- ANY DISCHARGE OF PETROLEUM OR PETROLEUM PRODUCTS OF LESS THAN 25 GALLONS ONTO A PERVIOUS SURFACE SHALL BE LEGALLY REMOVED AND PROPERLY TREATED OR PROPERLY DISPOSED OF, OR OTHERWISE REMEDIATED, SO THAT NO CONTAMINATION FROM THE DISCHARGE REMAINS ON-SITE. SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO THE MICHIGAN'S EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF THE DISCOVERY OF THE RELEASE. ALL SPILLS WHICH CONTACT WATERS OF THE STATE MUST BE REPORTED TO THE CURRENT STATE'S EPA.
- SPILL REPORTING REQUIREMENTS: SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LAND FILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO THE MICHIGAN'S EPA.
- CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS USED ON-SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION DEMOLITION AND DEBRIS (CDD&D) WASTE MUST BE DISPOSED OF AT THE MICHIGAN'S EPA APPROVED CDD&D LAND FILL.
- PROCESS WASTE WATER/LEACHATE MANAGEMENT : EPA'S CONSTRUCTION GENERAL PERMIT ONLY ALLOWS THE DISCHARGE OF STORM WATER AND DOES NOT INCLUDE OTHER WASTE STREAMS/DISCHARGES SUCH AS VEHICLE AND/OR EQUIPMENT WASHING, ON-SITE SEPTIC LEACHATE CONCRETE WASH OUTS, WHICH ARE CONSIDERED PROCESS WASTEWATERS. ALL PROCESS WASTEWATERS MUST BE COLLECTED AND PROPERLY DISPOSED AT AN APPROVED DISPOSAL FACILITY. IN THE EVENT, LEACHATE OR SEPTAGE IS DISCHARGED, IT MUST BE ISOLATED FOR COLLECTION AND PROPER DISPOSAL AND CORRECTIVE ACTIONS TAKEN TO ELIMINATE THE SOURCE OF WASTE WATER.
- WASTES GENERATED BY CONSTRUCTION ACTIVITIES (I.E. CONSTRUCTION MATERIALS SUCH AS PAINTS, SOLVENTS, FUELS, CONCRETE, WOOD, ETC) MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS. HAZARDOUS AND TOXIC SUBSTANCES ARE USED ON VIRTUALLY ALL CONSTRUCTION SITES. GOOD MANAGEMENT OF THESE SUBSTANCES IS ALWAYS NEEDED.
- NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED OR BURNED ON-SITE.
- HANDLING CONSTRUCTION CHEMICALS: MIXING, PUMPING, TRANSFERRING OR OTHER HANDLING OF CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
- EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL, OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HRS. OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER. SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS MAY APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVE GROUND TANK OF 660 GALLONS OR MORE, ACCUMULATIVE ABOVE GROUND STORAGE OF 1330 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. CONTAMINATED SOILS MUST BE PROPERLY DISPOSED OF IN ACCORDANCE WITH LOCAL GOVERNING AUTHORITY REGULATIONS. SPCC PLAN AND APPROVALS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTAMINATED SOILS: IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LAND FILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION / DEMOLITION DEBRIS LAND FILL). NOTE THOSE STORM WATER RUNOFFS ASSOCIATED WITH CONTAMINATED SOILS ARE NOT BE AUTHORIZED UNDER CURRENT REGULATIONS OF CONSTRUCTION ACTIVITIES.

- CONTRACTOR SHALL TAKE PREVENTIVE MEASURES FOR WATER DISCHARGES FROM CONTAMINATED SOILS BY ANY MEANS POSSIBLE, INCLUDING THE FOLLOWING:
  - THE USE OF BERMS, TRENCHES, AND PITS TO COLLECT CONTAMINATED RUNOFF AND PREVENT DISCHARGES.
  - PUMPING RUNOFF INTO A SANITARY SEWER (WITH PRIOR WRITTEN APPROVAL OF THE SANITARY SEWER SERVICE OPERATOR) OR INTO A CONTAINER FOR TRANSPORT TO AN APPROPRIATE TREATMENT/DISPOSAL FACILITY.
  - COVERING AREAS OF CONTAMINATION WITH TARPS OR OTHER METHODS THAT PREVENT STORMWATER FROM COMING INTO CONTACT WITH CONTAMINATED MATERIALS.

## TEMPORARY SEEDING

- STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.
- TEMPORARY SEEDING / STABILIZATION SHALL BE APPLIED WITHIN THE FOLLOWING TIME FRAMES FOR VARIOUS AREAS OF THE SITE:
  - ANY DISTURBED AREA WITHIN 50 FEET OF A WATERCOURSE AND NOT AT FINAL GRADE SHALL BE SEEDED AND MULCHED WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE. IF THAT AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
  - ALL CONSTRUCTION ACTIVITIES IN ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES THAT WILL BE IDLE FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A WATERCOURSE SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE IN THE AREA.
  - DISTURBED AREAS THAT WILL BE IDLE OVER THE WINTER SHALL BE SEEDED AND MULCHED PRIOR TO NOVEMBER 1.
- THE SEED BED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHOULD NOT BE POSTPONED IF IDEAL SEED BED PREPARATION IS NOT POSSIBLE.
- TEMPORARY VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION, WHICH MAY REQUIRE USE OF SOIL AMENDMENTS, BASE RATES FOR LIME AND FERTILIZER SHALL BE USED.
- ALL SEED MIXES AND SEEDING RATES USED SHALL BE APPROVED BY THE LOCAL GOVERNING AUTHORITY AND THE OWNER.
- SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER, SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
- APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH, WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION. IF MULCH IS USED, FOLLOW THE REQUIREMENTS AND INSTRUCTIONS IN THE MULCH APPLICATION.

## MULCH

- MULCH AND OTHER APPROPRIATE VEGETATIVE PRACTICES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREA IS TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 21 DAYS OR ON AREAS AND PORTIONS OF THE SITE WHICH CAN BE BROUGHT TO FINAL GRADE.
  - MULCH SHALL CONSIST OF ONE OF THE FOLLOWING:
    - STRAW SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/AC, OR 90 LB./1,000 SQ. FT. (TWO TO THREE BALES) THE STRAW MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED, FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ. FT. SECTIONS AND PLACE TWO 45-LB BALES OF STRAW IN EACH SECTION.
    - WOOD CELLULOSE FIBER SHOULD BE USED AT 2,000 LB./AC, OR 46 LB./1,000 SQ. FT.
    - ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS AND ROLLED EROSION CONTROL PRODUCTS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD MULCH/CHIPS APPLIED AT 10-20 TONS/AC.
  - MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR RUNOFF. THE FOLLOWING ARE ACCEPTABLE METHODS FOR ANCHORING MULCH.
    - USE A DISK CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT BE LEFT GENERALLY LONGER THAN 6 INCHES.
    - USE MULCH NETTINGS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, FOLLOWING ALL PLACEMENT AND ANCHORING REQUIREMENTS. USE IN AREAS OF WATER CONCENTRATION AND STEEP SLOPES TO HOLD MULCH IN PLACE.
    - FOR STRAW MULCH, SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER. ALL APPLICATIONS OF SYNTHETIC BINDERS MUST BE CONDUCTED IN SUCH A MANNER WHERE THERE IS NO CONTACT WITH WATERS OF THE STATE.
    - WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LB./AC. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LB/100 GAL. OF WOOD CELLULOSE FIBER.

## DUST CONTROL NOTES

- DUST CONTROL SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, IF POSSIBLE GRADING SHALL BE DONE BY PHASING IN ORDER TO MINIMIZE THE AMOUNT OF LAND DISTURBANCE AT ONE TIME. IF PHASING IS NOT AN OPTION, DUST SHALL BE CONTROLLED WITH WATER DURING EARTHWORK OPERATIONS. AFTER EARTHWORK OPERATIONS, THE EXPOSED SOILS SHALL BE COVERED WITH STRAW OR MULCH UNTIL SEEDED.
- DUST CONTROL OR DUST SUPPRESSANTS MAY BE USED TO PREVENT NUISANCE CONDITIONS WHEN APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION. WHEN USED, SUPPRESSANTS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IN A MANNER, WHICH PREVENTS A DISCHARGE TO WATERS OF THE STATE. SUFFICIENT DISTANCE MUST BE PROVIDED BETWEEN APPLICATIONS AND NEARBY BRIDGES, CATCH BASINS, AND OTHER WATERWAYS. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN RAIN IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. OIL MAY NOT BE APPLIED FOR DUST CONTROL.
- SUGGESTED METHODS OF CONSTRUCTION DUST CONTROL MAY INCLUDE THE FOLLOWING:
  - CONSTRUCTION SEQUENCING AND DISTURBING ONLY SMALL AREAS AT A TIME CAN GREATLY REDUCE PROBLEMATIC DUST FROM THE SITE. IF LAND MUST BE DISTURBED, ADDITIONAL TEMPORARY STABILIZATION MEASURES SHOULD BE CONSIDERED PRIOR TO DISTURBANCES.
  - APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 14 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS.
  - SPRAY DISTURBED SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS MAY BE UTILIZED ACCORDING TO MANUFACTURERS INSTRUCTIONS.
  - GRADED ROADWAYS AND OTHER SUITABLE AREAS MAY BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
  - EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED TO THE EXTENT POSSIBLE. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHTS TO CONTROL AIR CURRENTS AND BLOWING SOIL.
  - WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH SATISFACTORY CONTROL.
  - PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED, UTILIZING A STREET SWEEPER OR BUCKET-TYPE ENDLOADER OR SCRAPER.

## DEWATERING

DEWATERING REFERS TO THE ACT OF REMOVING AND DISCHARGING WATER FROM EXCAVATED AREAS ON CONSTRUCTION SITES. UTILITY LINE CONSTRUCTION OR FROM SEDIMENT TRAPS OR BASINS ON CONSTRUCTION SITES. GIVEN THE UNIQUE CONDITIONS AT ANY PARTICULAR CONSTRUCTION SITE, ANY OR ALL OF THE PRACTICES MAY APPLY. IN ALL CASES, EVERY EFFORT SHALL BE MADE TO ELIMINATE SEDIMENT POLLUTION ASSOCIATED WITH DEWATERING.

### PRACTICES FOR DEWATERING EXCAVATED AREAS

- PUMPING OF WATER TO AN EXISTING SEDIMENT BASIN OR TRAP IN WHICH THE ENTIRE VOLUME OF WATER FROM THE AREA TO BE DEWATERED CAN BE CONTAINED WITHOUT DISCHARGE TO RECEIVING WATERS.
- PUMPING OF WATER TO AN EXISTING SEDIMENT BASIN OR TRAP SUCH THAT THE ENTIRE VOLUME OF WATER FROM THE AREA TO BE DEWATERED CAN BE MANAGED WITHOUT EXCEEDING THE DESIGN OUTFLOW FROM THE SEDIMENT CONTROL STRUCTURE.
- USE OF A STRAW BALE/SILT FENCE PIT OR TRAP AS DESCRIBED HEREIN AND APPROVED BY THE LOCAL GOVERNING AUTHORITY.
- PUMPING WATER THROUGH A GEOTEXTILE BAG MADE SPECIFICALLY FOR THIS PURPOSE.
- A WELL-VEGETATIVE FILTER STRIP, CAPABLE OF WITHSTANDING THE VELOCITY OF DISCHARGED WATER WITHOUT ERODING, INCLUDING THE INSTALLATION OF ENERGY DISSIPATION (HAYBALES, RIPRAP OR SHEET OF PLYWOOD) AT THE PUMP DISCHARGE.
- USE A SUMP PIT TO REDUCE THE PUMPING OF MUD.

DEWATERING OF SEDIMENT TRAPS AND BASINS. IN ALL CASES, WATER REMOVED FROM TRAPS AND BASINS SHALL BE DISCHARGED SO THAT IT PASSES THROUGH A SEDIMENT CONTROL DEVICE APPROVED BY THE LOCAL GOVERNING AUTHORITY PRIOR TO ENTERING RECEIVING WATERS. PRACTICES FOR DEWATERING OF TRAPS AND BASINS MAY INCLUDE SOME OR ALL OF THE FOLLOWING AS MAY BE APPROVED AND APPLICABLE. IN ALL CASES, THE DEWATERING OPERATIONS UTILIZED MUST BE CONTINUOUSLY MONITORED BY THE CONTRACTOR.

- USE OF A STRAW BALE/SILT FENCE PIT OR TRAP.
  - AN EXCAVATED BASIN (APPLICABLE TO "STRAW BALE/SILT FENCE PIT") MAY BE LINED WITH FILTER FABRIC TO HELP REDUCE SCOUR AND TO PREVENT EROSION OF SOIL FROM WITHIN THE STRUCTURE. IT MAY ALSO BE HELPFUL TO DIRECT THE DISCHARGE ONTO A HAY OR STRAW BALE OR RIPRAP.
  - MEASURES SHALL CONSIST OF STRAW BALES, SILT FENCE AND A STONE OUTLET CONSISTING OF A COMBINATION OF 4-8 INCH RIPRAP AND 1/4 TO 2 INCH AGGREGATE AND A WET STORAGE PIT ORIENTED AS SHOWN IN DRAWING.
  - THE EXCAVATED AREA SHOULD BE A MINIMUM OF 3 FEET BELOW THE BASE OF THE PERIMETER MEASURES (STRAW BALES OR SILT FENCE).
  - ONCE THE WATER LEVEL NEARS THE CREST OF THE STONE WEIR (EMERGENCY OVERFLOW), THE PUMP MUST BE STOPPED WHILE THE STRUCTURE DRAINS DOWN TO THE ELEVATION OF THE WET STORAGE.
  - THE WET STORAGE PIT MAY BE DEWATERED ONLY AFTER A MINIMUM OF 6 HOURS OF SEDIMENT SETTLING TIME. THIS EFFLUENT SHOULD BE PUMPED ACROSS A WELL-VEGETATED AREA OR THROUGH A SILT FENCE PRIOR TO ENTERING A WATERCOURSE.
  - ONCE THE DEVICE HAS BEEN REMOVED, GROUND CONTOURS SHALL BE RETURNED TO ORIGINAL CONDITION.
- PUMPING WATER THROUGH A GEOTEXTILE BAG MADE SPECIFICALLY FOR THIS PURPOSE.
  - THE BAG SHALL BE INSTALLED ON A VERY SLIGHT SLOPE SO INCOMING WATER FLOWS DOWNHILL THROUGH THE BAG WITHOUT CREATING MORE EROSION.
  - THE INLET OPENING OF THE DEWATERING DEVICE SHALL HAVE A FILL SPOUT LARGE ENOUGH TO ACCOMMODATE THE DISCHARGE HOSE AND SHALL USE TWO STAINLESS STEEL STRAPS TO SECURE THE HOSE AND PREVENT PUMPED WATER FROM ESCAPING WITHOUT BEING FILTERED.
  - THE BAG SHOULD BE PLACED ON AN AGGREGATE OR HAY BALE BED TO MAXIMIZE WATER FLOW THROUGH THE ENTIRE SURFACE AREA OF THE BAG.
  - THE FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR PASS WATER AT A REASONABLE RATE.
  - FLOW RATES VARY DEPENDING ON THE SIZE OF THE DEWATERING DEVICE, AMOUNT OF SEDIMENT DISCHARGED INTO THE DEWATERING DEVICE, THE TYPE OF GROUND, ROCK, OR OTHER SUBSTANCE UNDER THE BAG AND THE DEGREE OF THE SLOPE ON WHICH THE BAG LIES. THE FILTER BAG SHOULD BE SIZED TO ACCOMMODATE THE ANTICIPATED FLOW RATES FROM THE TYPE OF PUMP USED. IN ALL CASES FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR PUMPING FLOW RATES.
  - THE FILTER BAG CAN BE LEFT IN PLACE AFTER CUTTING THE TOP OFF AND SEEDING AND MULCHING THE ACCUMULATED SEDIMENT OR REMOVED AND DISPOSED OF OFFSITE IN AN APPROVED LANDFILL.
- A WELL-VEGETATIVE FILTER STRIP, CAPABLE OF WITHSTANDING THE VELOCITY OF DISCHARGED WATER WITHOUT ERODING, INCLUDING THE INSTALLATION OF ENERGY DISSIPATION (HAYBALES, RIPRAP OR SHEET OF PLYWOOD) AT THE PUMP DISCHARGE. SUCH OTHER METHODS AS MAY BE APPROVED BY THE LOCAL GOVERNING AUTHORITY.

- REGARDLESS OF THE TYPE OF TREATMENT, ALWAYS USE A FLOATING SUCTION HOSE TO PUMP THE CLEANER WATER FROM THE TOP OF THE POND, AS THE CLEANER WATER IS PUMPED. THE SUCTION HOSE WILL LOWER AND EVENTUALLY ENCOUNTER SEDIMENT-LADEN WATER. AT THIS POINT CEASE PUMPING OPERATIONS AND REMOVE THE REMAINDER OF THE TRAPPED SEDIMENT WITH MACHINERY. EVEN WHEN PUMPING FROM THE TOP OF THE WATER COLUMN, PROVISIONS MUST STILL BE MADE TO FILTER WATER AS REQUIRED IN THIS SECTION PRIOR TO DISCHARGING TO A STREAM. DURING THE DEWATERING, PERSONNEL SHOULD BE ASSIGNED TO MONITOR PUMPING OPERATIONS AT ALL TIMES TO ENSURE THAT SEDIMENT POLLUTION IS ABATED. PUMPING SEDIMENT-LADEN WATER INTO THE WATERS OF THE STATE WITHOUT FILTRATION IS PROHIBITED.

- THE DEWATERING DEVICE MUST BE SIZED (AND OPERATED) TO ALLOW PUMPED WATER TO FLOW THROUGH THE FILTERING APPARATUS WITHOUT EXCEEDING THE CAPACITY OF THE STRUCTURE.



520 South Main Street, Suite 2531  
Akron, OH 44311

330.572.2100 Fax: 330.572.2102

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21

BUILDING TYPE: END. MED20

PLAN VERSION: MARCH 2021

BRAND DESIGNER: DICKSON

SITE NUMBER: 315390

STORE NUMBER: 457226

PA/PM: SM

DRAWN BY.: EA

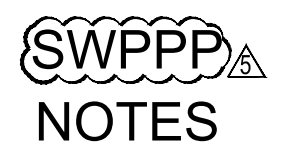
JOB NO.: 2021088.48

## TACO BELL

17669 23 Mile Road  
Macomb, MI 48042



ENDEAVOR 2.0

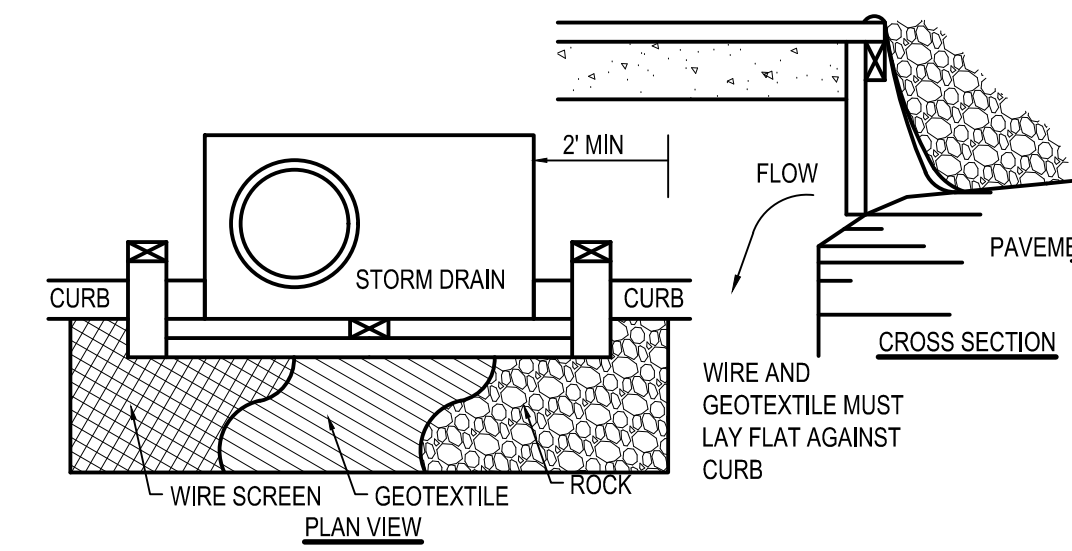


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PLOT DATE:

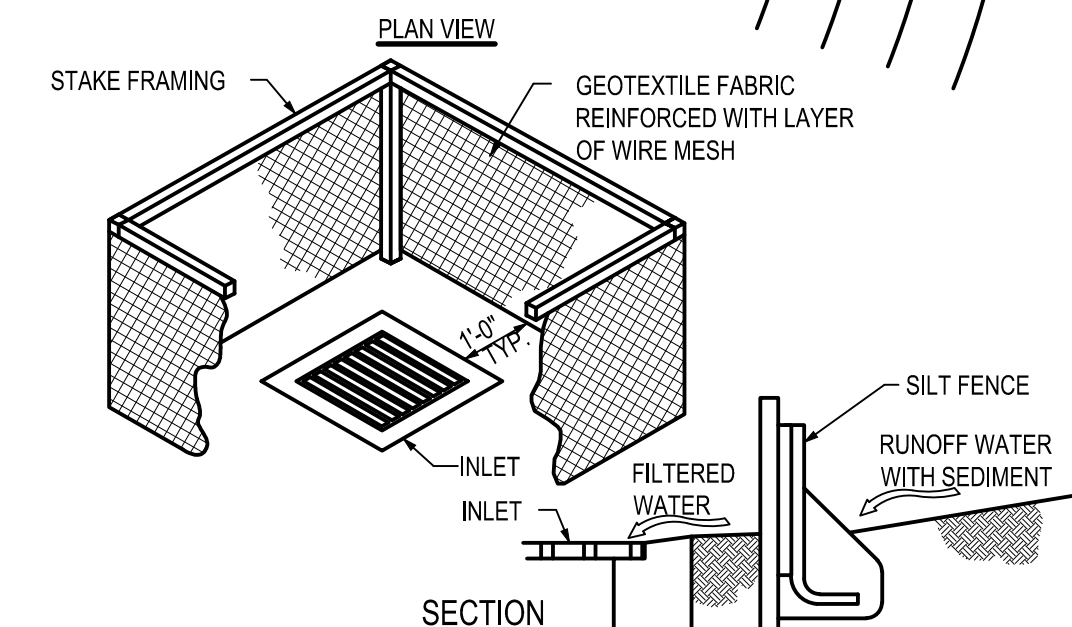
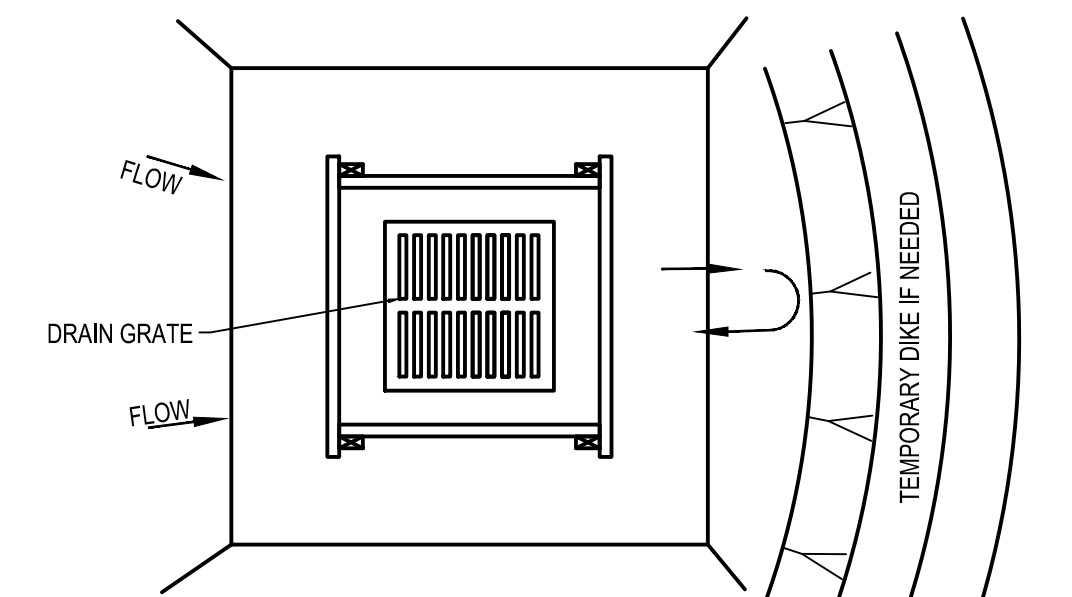
**CONSTRUCTION ENTRANCE NOTES**

- STONE SIZE - NO. 2 STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
- THE CONSTRUCTION ENTRANCE SHALL COINCIDE WITH THE PROPOSED DRIVE AS SHOWN ON THE PLAN.
- PAVEMENT THICKNESS - STONE LAYER SHALL BE 6" THICK FOR STANDARD DUTY ACTIVITY AND 10" THICK FOR HEAVY DUTY ACTIVITY.
- DRIVEWAY WIDTH - THE ENTRANCE SHALL BE AT LEAST 20' WIDE. CONTRACTOR SHALL ENSURE ALL VEHICLES UTILIZE THE CONSTRUCTION ENTRANCE UNTIL PAVEMENT IS IN PLACE.
- BEDDING-A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE SPECIFICATIONS SHOWN BELOW.
- CULVERT-A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
- MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND, MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPPING OR SWEEPING.
- CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SHALL BE RESTRICTED FROM MUDDY AREAS.
- THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.



- INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.
- CONSTRUCT A WOODEN FRAME OF 2-BY-4-IN. CONSTRUCTION-GRADE LUMBER. THE END SPACERS SHALL BE A MINIMUM OF 1 FT. BEYOND BOTH ENDS OF THE THROAT OPENING. THE ANCHORS SHALL BE NAILED TO 2-BY-4-IN. STAKES DRIVEN ON THE OPPOSITE SIDE OF THE CURB.
- THE WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC AND STONE. IT SHALL BE A CONTINUOUS PIECE WITH A MINIMUM WIDTH OF 30 IN. AND 4 FT. LONGER THAN THE THROAT LENGTH OF THE INLET, 2 FT. ON EACH SIDE.
- GEOTEXTILE CLOTH SHALL HAVE AN EQUIVALENT OPENING SIZE (EOS) OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE AT LEAST THE SAME SIZE AS THE WIRE MESH.
- THE WIRE MESH AND GEOTEXTILE CLOTH SHALL BE FORMED TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET AND SECURELY FASTENED TO THE 2-BY-4-IN. FRAME.
- TWO-INCH STONE SHALL BE PLACED OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE CLOTH. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE STONE AND/OR GEOTEXTILE REPLACED WHEN CLOGGED WITH SEDIMENT.

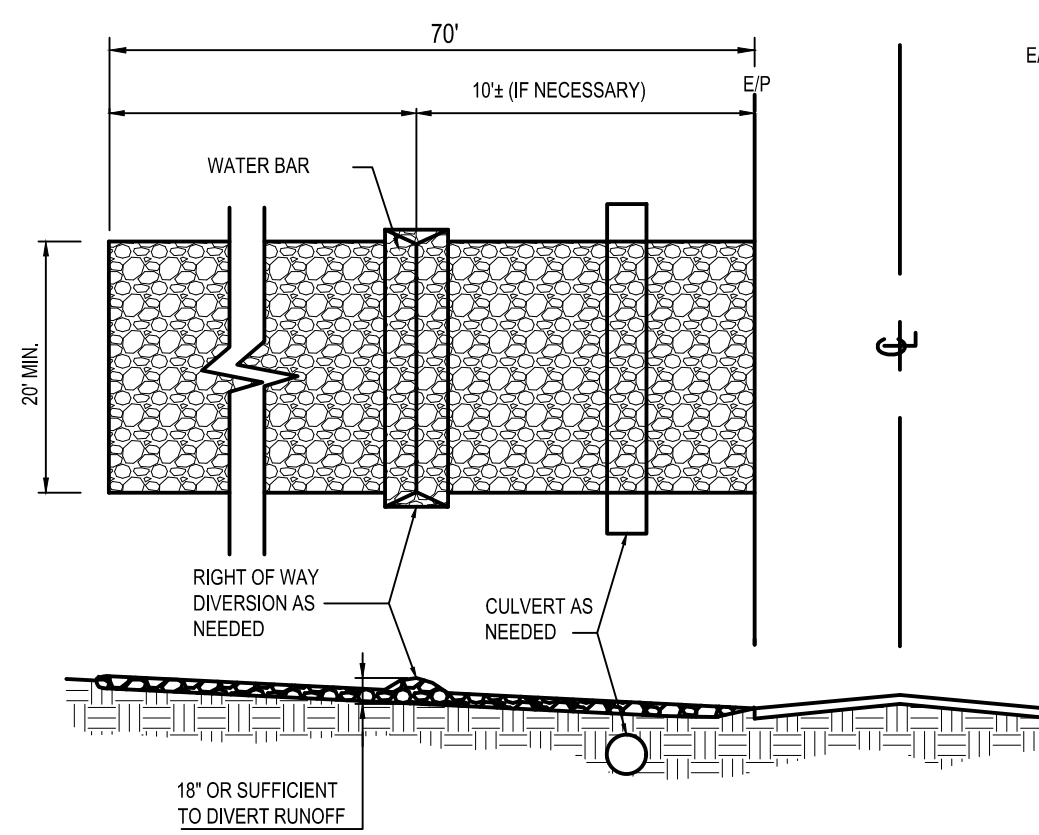
**C4 CURB INLET PROTECTION**  
N.T.S.



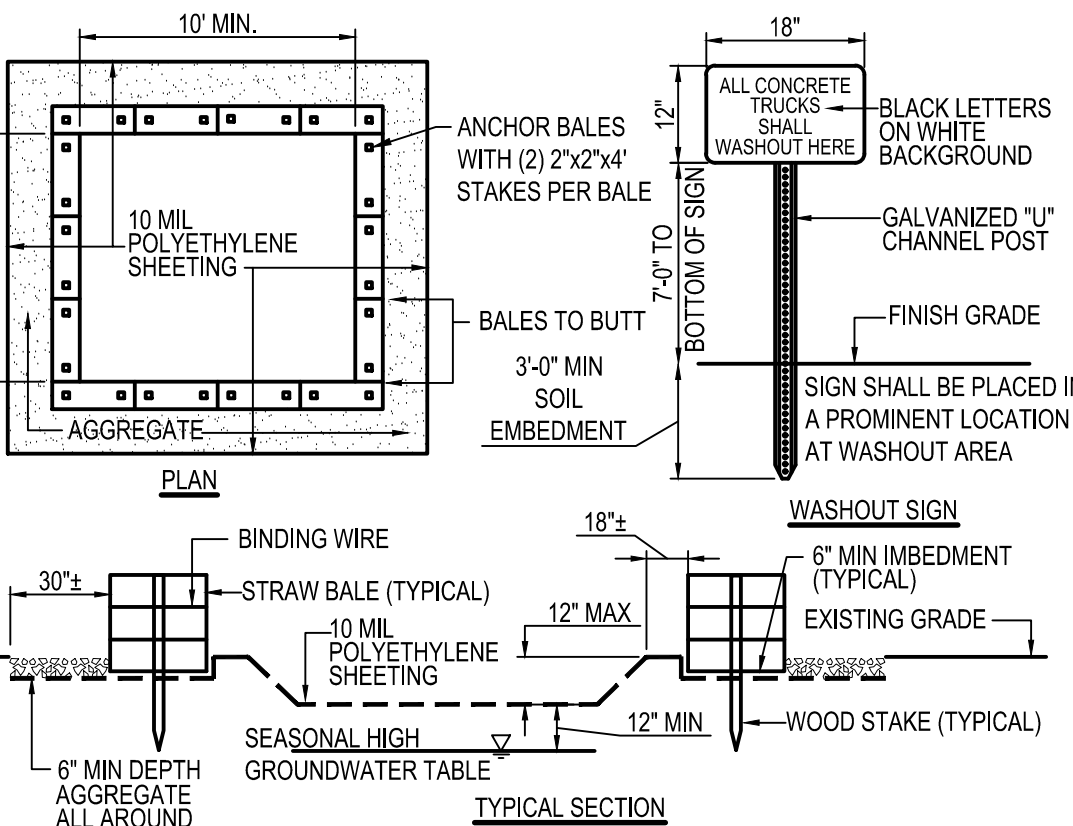
- NOTES:
- INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.
  - SILT FENCE SHALL BE GEOTEXTILE FABRIC, PER STATE'S DEPARTMENT OF TRANSPORTATION STANDARDS, AND SHOULD BE CUT FROM A CONTINUOUS ROLL TO AVOID JOINTS.
  - STAKES SHALL BE 1" x 2" WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET. STAKES SHALL BE SPACED AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 5 FEET APART AND SECURELY DRIVEN INTO THE GROUND (MINIMUM OF 8 INCHES). THE TOP OF THE FRAME SHALL BE AT LEAST 6 IN. BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
  - WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
  - THE SILT FENCE SHALL BE STAPLED WITH HEAVY DUTY WIRE STAPLES AT LEAST 1/2 INCH LONG TO THE WOODEN STAKES, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE HEIGHT OF THE FILTER BARRIER SHALL BE A MINIMUM OF 15 INCHES AND SHALL NOT EXCEED 18 INCHES (PLATE 1.08B).
  - THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
  - A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE STAKES.
  - BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6 IN. LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
  - A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6 IN. HIGHER THAN THE TOP OF THE FRAME.

MAINTENANCE:  
SILT FENCE SHOULD BE INSPECTED REGULARLY AND FREQUENTLY AS WELL AS AFTER EACH RAINFALL EVENT TO ENSURE THAT THEY ARE INTACT AND THERE ARE NO GAPS AT THE FENCE-GROUND INTERFACE OR TEARS ALONG THE LENGTH OF THE FENCE. IF GAPS OR TEARS ARE FOUND, THEY SHOULD BE REPAIRED OR THE FABRIC REPLACED IMMEDIATELY. ACCUMULATED SEDIMENTS SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE. SEDIMENT REMOVAL SHOULD OCCUR MORE FREQUENTLY IF ACCUMULATED SEDIMENT IS CREATING NOTICEABLE STRAIN ON THE FABRIC AND THERE IS THE POSSIBILITY OF THE FENCE FAILING FROM A SUDDEN STORM EVENT. WHEN THE SILT FENCE IS REMOVED, THE ACCUMULATED SEDIMENT SHOULD BE REMOVED.

**A4 SILT BARRIER**  
N.T.S.



**B3 TEMPORARY STABILIZED CONSTRUCTION ENTRANCE**  
N.T.S.



- NOTES:
- CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
  - CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
  - WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
  - WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
  - ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
  - AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

**A3 CONCRETE WASHOUT AREA**  
N.T.S.

COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPF)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (MFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

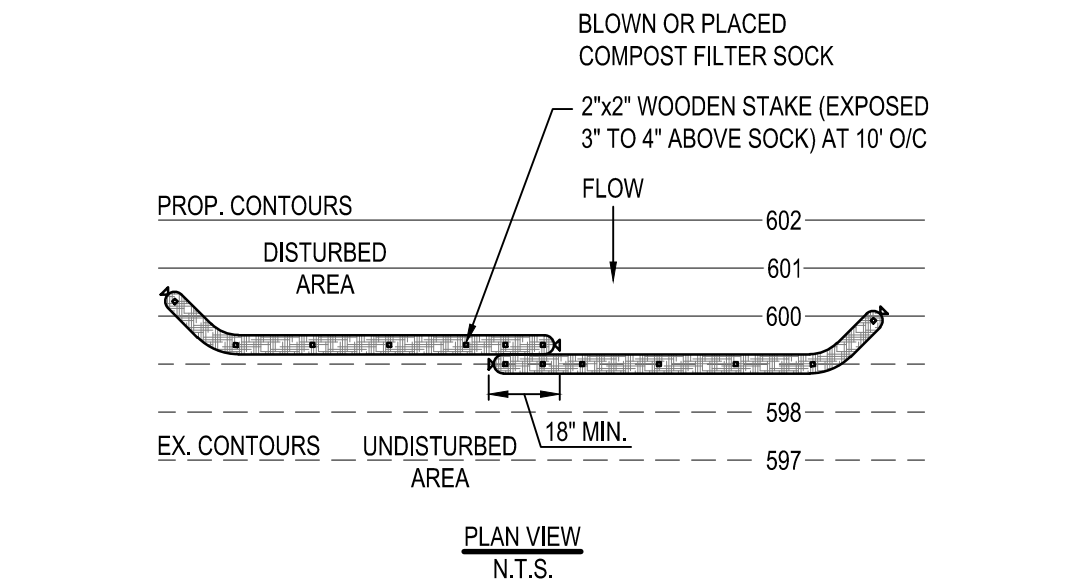
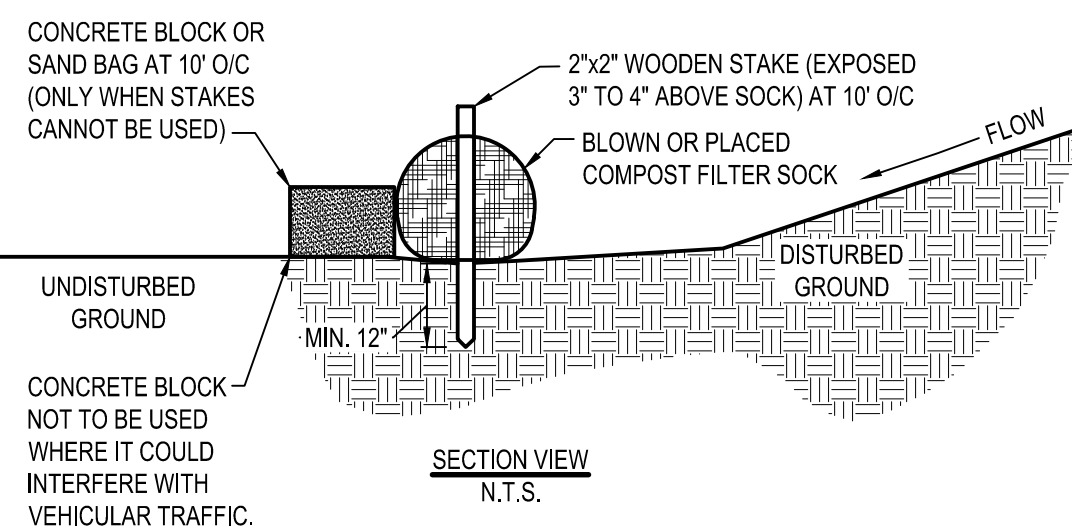
TWO-PLY SYSTEMS

INNER CONTAINMENT NETTING	HDPE BIAXIAL NET
	CONTINUOUSLY WOUND
	FUSION-WELDED JUNCTURES
	3/4" X 3/4" MAX. APERTURE SIZE
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER & NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)
	3/16" MAX. APERTURE SIZE

SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS

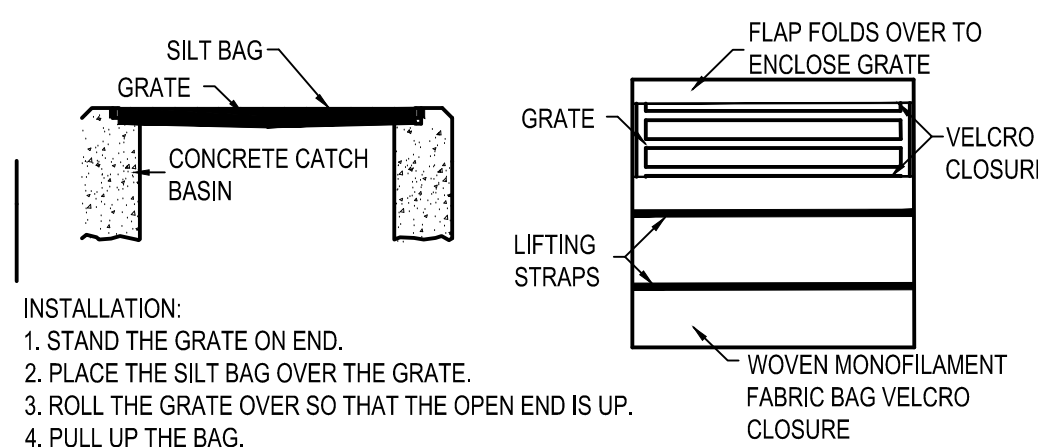
COMPOST SHALL MEET THE FOLLOWING STANDARDS:

ORGANIC MATTER CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 g/s MAXIMUM



- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 2 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH 1/2 INCH STORM RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

**A1 COMPOST FILTER SOCK**  
N.T.S.

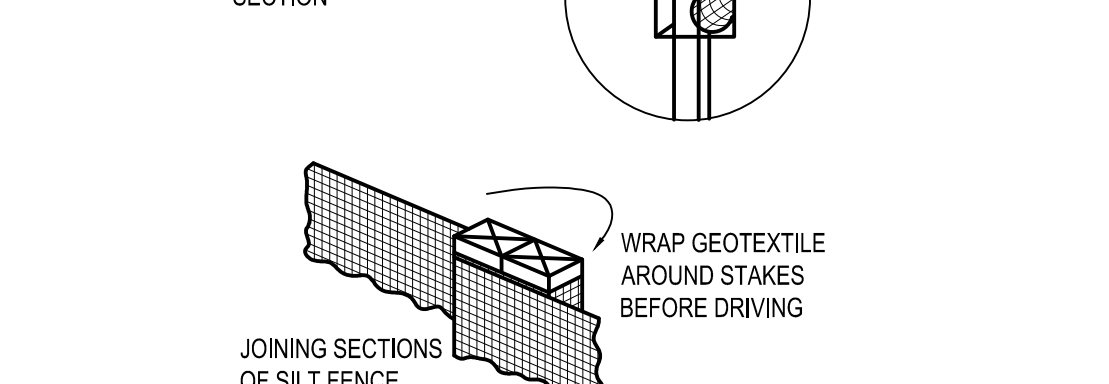
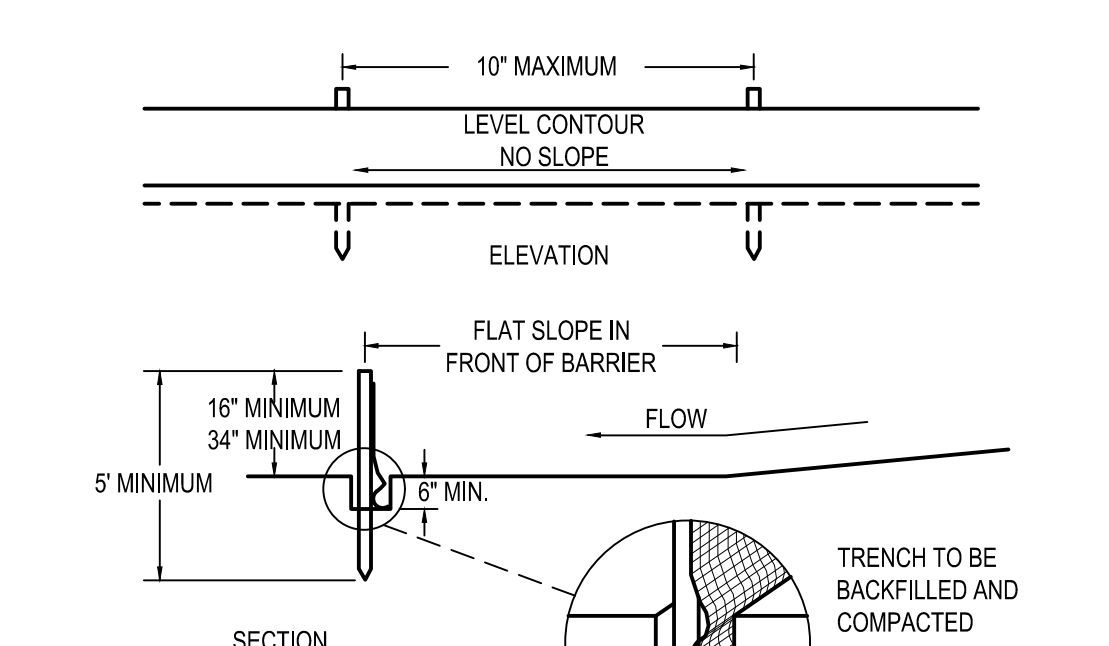


- INSTALLATION:
- STAND THE GRATE ON END.
  - PLACE THE SILT BAG OVER THE GRATE.
  - ROLL THE GRATE OVER SO THAT THE OPEN END IS UP.
  - PULL UP THE BAG.
  - TUCK THE FLAP IN.
  - PRESS THE VELCRO STRAPS TOGETHER.
  - BE SURE THAT THE END OF THE GRATE IS COMPLETELY COVERED BY THE FLAP OR THE SILT BAG WILL NOT WORK PROPERLY.
  - HOLDING THE HANDLES, CAREFULLY PLACE THE SILT BAG WITH THE GRATE INSERTED INTO THE CATCH BASIN FRAME.
- NOTE:  
PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. THE SILT BAG MUST NEVER BE USED WHERE OVERFLOW MAY ENDANGER AN EXPOSED SLOPE.
- MAINTENANCE:  
TO ENSURE PROPER OPERATION REMOVE SILT, SEDIMENT, AND DEBRIS FROM THE SURFACE AND THE VICINITY OF THE UNIT WITH A SQUARE POINT SHOVEL OR STIFF BRISTLE BROOM AWAY FROM ENVIRONMENTALLY SENSITIVE AREAS AND WATERWAYS IN MANNER SATISFACTORY TO THE ENGINEER/INSPECTOR. REMOVE FINE MATERIAL FROM INSIDE SILT BAG AS NEEDED. DISPOSE OF SILT BAG NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.

**A2 SILT BAG PROTECTION**  
N.T.S.

- NOTES:
- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
  - ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
  - TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.
  - WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
  - WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FT. (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
  - THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 IN. ABOVE THE ORIGINAL GROUND SURFACE.
  - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP, AND SECURELY SEALED.
  - POSTS SHALL BE A MINIMUM OF 5 FEET LONG, 2 INCHES IN DIAMETER AND SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND. WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
  - THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
  - THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 IN. OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6 IN. DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.
  - WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.
  - THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
  - SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.
  - SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: A) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, B) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR C) OTHER PRACTICES SHALL BE INSTALLED.

MAINTENANCE:  
SILT FENCE SHOULD BE INSPECTED REGULARLY AND FREQUENTLY AS WELL AS AFTER EACH RAINFALL EVENT TO ENSURE THAT THEY ARE INTACT AND THERE ARE NO GAPS AT THE FENCE-GROUND INTERFACE OR TEARS ALONG THE LENGTH OF THE FENCE. IF GAPS OR TEARS ARE FOUND, THEY SHOULD BE REPAIRED OR THE FABRIC REPLACED IMMEDIATELY. ACCUMULATED SEDIMENTS SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE. SEDIMENT REMOVAL SHOULD OCCUR MORE FREQUENTLY IF ACCUMULATED SEDIMENT IS CREATING NOTICEABLE STRAIN ON THE FABRIC AND THERE IS THE POSSIBILITY OF THE FENCE FAILING FROM A SUDDEN STORM EVENT. WHEN THE SILT FENCE IS REMOVED, THE ACCUMULATED SEDIMENT SHOULD BE REMOVED.



CRITERIA FOR GEOTEXTILE FABRIC SILT FENCE, PER CURRENT STATE'S DOT SPECIFICATIONS.

FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LB. MINIMUM	ASTM D 4632
MINIMUM BURST STRENGTH	200 PSI MINIMUM	
MINIMUM PERMITTIVITY	1x10 <sup>-2</sup> sec <sup>-1</sup>	ASTM D 4491
APPARENT OPENING SIZE	ACS < 0.84 mm	ASTM D 4751
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4335
MAXIMUM ELONGATION AT 60 LBS.	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS (220N)	ASTM D 4833
MINIMUM TEAR STRENGTH	40 LBS (180N)	ASTM D 4533

**A5 SILT FENCE**  
N.T.S.

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48



ENDEAVOR 2.0  
DETAILS  
**C-011**

**CONSTRUCTION SEQUENCE**

1. DURING PRECONSTRUCTION MEETING ALL EROSION & SEDIMENT CONTROL FACILITIES & PROCEDURES SHALL BE DISCUSSED. A GENERAL CONSTRUCTION SEQUENCE FOLLOWS AND MAY NEED TO BE UPDATED BY THE CONTRACTOR TO SUIT THE SPECIFICS OF THE SITE AND INTENDED CONTRACTOR SPECIFIC SEQUENCING.
- 1.1. INSTALL CONSTRUCTION ENTRANCE AS DETAILED ON PLANS. TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED AROUND PERIMETER OF CONSTRUCTION SITE. WHERE THERE IS EXISTING FENCE ALONG THE PERIMETER OF THE SITE, IT CAN BE UTILIZED. FENCING SHALL BE USED TO RESTRICT OUTSIDE TRAFFIC TO SITE.
- 1.2. DELIVER CONSTRUCTION TRAILER TO SITE AND INSTALL TEMPORARY POWER AND TELEPHONE, IF REQUIRED. TEMPORARY UTILITY SERVICES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 1.3. STAKE AND/OR FLAG LIMITS OF CLEARING.
- 1.4. CLEAR & GRUB, AS NECESSARY, FOR INSTALLATION OF PERIMETER CONTROLS. INSTALL SILT PERIMETER CONTROLS AS SHOWN ON PLANS. SILT PERIMETER CONTROLS SHALL BE INSTALLED LEVEL, ALONG THE CONTOURS, WITH ENDS TURNED UPSLOPE TO PREVENT CONCENTRATED FLOW AT THE SILT PERIMETER CONTROLS.
- 1.5. INSTALL TEMPORARY SILT INLET PROTECTION ON ALL EXISTING CATCH BASINS AND INLETS, AS DESIGNATED IN THE PLANS. REMOVAL OF SILT INLET PROTECTION FROM DESIGNATED INLETS CAN ONLY OCCUR WHEN A STRUCTURE IS REMOVED, AND AS REQUIRED BY THE PROGRESSION OF THE DEMOLITION AND CONSTRUCTION.
- 1.6. CLEAR & GRUB, AS NECESSARY, FOR INSTALLATION OF TEMPORARY SEDIMENT TRAP/BASIN. INSTALL TEMPORARY SEDIMENT TRAP/BASIN, IF REQUIRED, AS DETAILED IN THE PLANS. CONSTRUCT AND MAINTAIN TEMPORARY DIVERSION SWALE AND / OR DIVERSION BERM DURING FILLING & GRADING ACTIVITIES.
- 1.7. CLEAR & GRUB THE REMOVED SITE AS NECESSARY. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR REUSE, OR REMOVED TO AN APPROVED OFFSITE SPOIL AREA.
- 1.8. UTILIZE DUST CONTROL MEASURES AS REQUIRED TO MINIMIZE AIR-BORNE POLLUTION BY METHODS APPROVED BY THE AUTHORIZING EPA OFFICE.
- 1.9. BEGIN FILLING & GRADING AS REQUIRED TO REACH SUBGRADE.
- 1.10. ONCE PAVEMENT GRADES HAVE BEEN ESTABLISHED, AS DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL UTILIZE THESE AREAS FOR STRUCTURE CONSTRUCTION.
- 1.11. CONSTRUCT UNDERGROUND UTILITY WORK INCLUDING STORM DRAINAGE FACILITIES. UPON INSTALLATION OF STORM DRAINAGE CATCH BASINS, YARD DRAINS AND INLETS, INSTALL REQUIRED INLET PROTECTION.
- 1.12. DO NOT REPLACE ANY TOPSOIL, SEED OR INSTALL FINAL PAVEMENT PRIOR TO COMPLETION OF BUILDING SHELL. SHOULD SITEWORK BE COMPLETED PRIOR TO THIS DATE, MULCH DISTURBED AREAS TO BE PLANTED AND INSTALL STONE SUBBASE IN DISTURBED AREAS TO BE PAVED.
- 1.13. FOLLOWING COMPLETION OF BUILDING SHELL AND PAVEMENT INSTALLATION, BEGIN LANDSCAPE INSTALLATION.
- 1.14. COMPLETE SITEWORK, PAVEMENT MARKINGS AND FINAL CLEAN-UP. RESEED ANY AREAS THAT MAY REQUIRE ATTENTION IMMEDIATELY. NOTE THAT LAWN AREAS WILL NOT BE DEEMED STABLE UNTIL A MINIMUM 80% VEGETATIVE DENSITY HAS BEEN ACHIEVED.
- 1.15. MAINTAIN EROSION & SEDIMENTATION CONTROL MEASURES UNTIL THE SITE HAS BEEN COMPLETELY STABILIZED. ALL AREAS OF VEGETATIVE SURFACE, WHETHER PERMANENT OR TEMPORARY, SHALL BE CONSIDERED TO BE IN PLACE AND FUNCTIONAL WHEN THE REQUIRED UNIFORM RATE OF COVERAGE (80%) IS OBTAINED.
- 1.16. REMOVE SEDIMENT CONTROLS.

**PROJECT DESCRIPTION**

THIS SUBJECT PROJECT AREA IS 2.17 ACRE SITE WHICH IS A VACANT LOT. THE IMPROVEMENTS TO THIS SITE WILL INCLUDE BUT NOT LIMITED TO A NEW TACO BELL RESTAURANT, NEW PARKING LOT, CONCRETE SIDEWALKS, ALL APPURTENANT UTILITY CONNECTIONS, DETENTION POND, GRADING AND LANDSCAPING.

**PROJECT COMPLETION STATISTICS**

PARCEL SIZE:	2.17 ACRES
TOTAL DISTURBED AREA:	1.73 ACRES
EXISTING LAND USE FOR THE SITE IS VACANT LOT.	
ESTIMATED PRE-CONSTRUCTION IMPERVIOUS AREA:	0.00 ACRES
ESTIMATED PRE-CONSTRUCTION IMPERVIOUS PERCENT:	0.0%
PRE-CONSTRUCTION RUN-OFF COEFFICIENT:	0.45
PROPOSED LAND USE WILL BE A TACO BELL.	
ESTIMATED POST-CONSTRUCTION IMPERVIOUS AREA:	1.07 ACRES
ESTIMATED POST-CONSTRUCTION IMPERVIOUS PERCENT:	49.3%
IMPERVIOUS AREA:	1.07 AC. (C=0.85)
PERVIOUS AREA:	1.10 AC. (C=0.45)
POST-CONSTRUCTION RUN-OFF COEFFICIENT:	0.70 (WEIGHTED C)

**PROJECT LOCATION:**

LATITUDE	LONGITUDE
42.6725°	-82.94732°

**EXISTING SITE SOIL TYPES:**

- BX: BREVORT-SELFRIDGE COMPLEX
- LG: LENAWEE SILTY CLAY LOAM.
- SDA: SELFRIDGE LOAMY SAND
- REFERENCE: USDA NATIONAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.

**WETLAND INFORMATION:**

THERE ARE NO KNOWN WETLANDS ON THIS SITE.

**FIRST AND SUBSEQUENT RECEIVING STREAM:**

INITIAL RECEIVING WATER IS DENYER TRAIL AND THE SUBSEQUENT RECEIVING WATER IS THE MIDDLE BRANCH CLINTON RIVER.

**POST CONSTRUCTION WQV / BMP DESCRIPTION**

IN ORDER TO MEET THE MACOMB COUNTY STORMWATER MANAGEMENT REGULATIONS AN ABOVE GROUND DETENTION SYSTEM IS PROVIDED WITH STORAGE TO HOLD 100 YEAR STORM EVENT AND A WATER QUALITY UNIT IS PROVIDED TO MEET THE WATER QUALITY REQUIREMENTS.

**OWNER CONTACT:**

42 MACOMB, LLC  
PETE ZINGAS  
646 GRISWOLD, SUITE 3466  
DETROIT, MI 48226  
313.962.6400 EXT. 227 FAX: 131.963.4614  
PZINGAS@SSZPC.COM

**ANTICIPATED TIMING:**

CONSTRUCTION BEGIN:	JULY 15, 2022
CONSTRUCTION COMPLETE:	OCTOBER 15, 2022

**CONTRACTOR: T.B.D.**

CONTACT: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

CONTRACTOR SHALL MAINTAIN A CONSTRUCTION LOG DOCUMENTING ALL GRADING AND STABILIZATION ACTIVITIES.

**BENCHMARKS AND BASIS OF BEARING:**

NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.

**BENCHMARK #1**  
ARROW ON FIRE HYDRANT, EAST OF EAST PROPERTY LINE, NORTH SIDE OF 23 MILE RD.  
ELEVATION = 611.36' (NAVD 88)

**BENCHMARK #2**  
MAG NAIL IN NORTH MOST UTILITY POLE BY WEST PROPERTY LINE.  
ELEVATION = 608.83' (NAVD 88)

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21

BUILDING TYPE: END. MED20

PLAN VERSION: MARCH 2021

BRAND DESIGNER: DICKSON

SITE NUMBER: 315390

STORE NUMBER: 457226

PA/PM: SM

DRAWN BY: EA

JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
Macomb, MI 48042

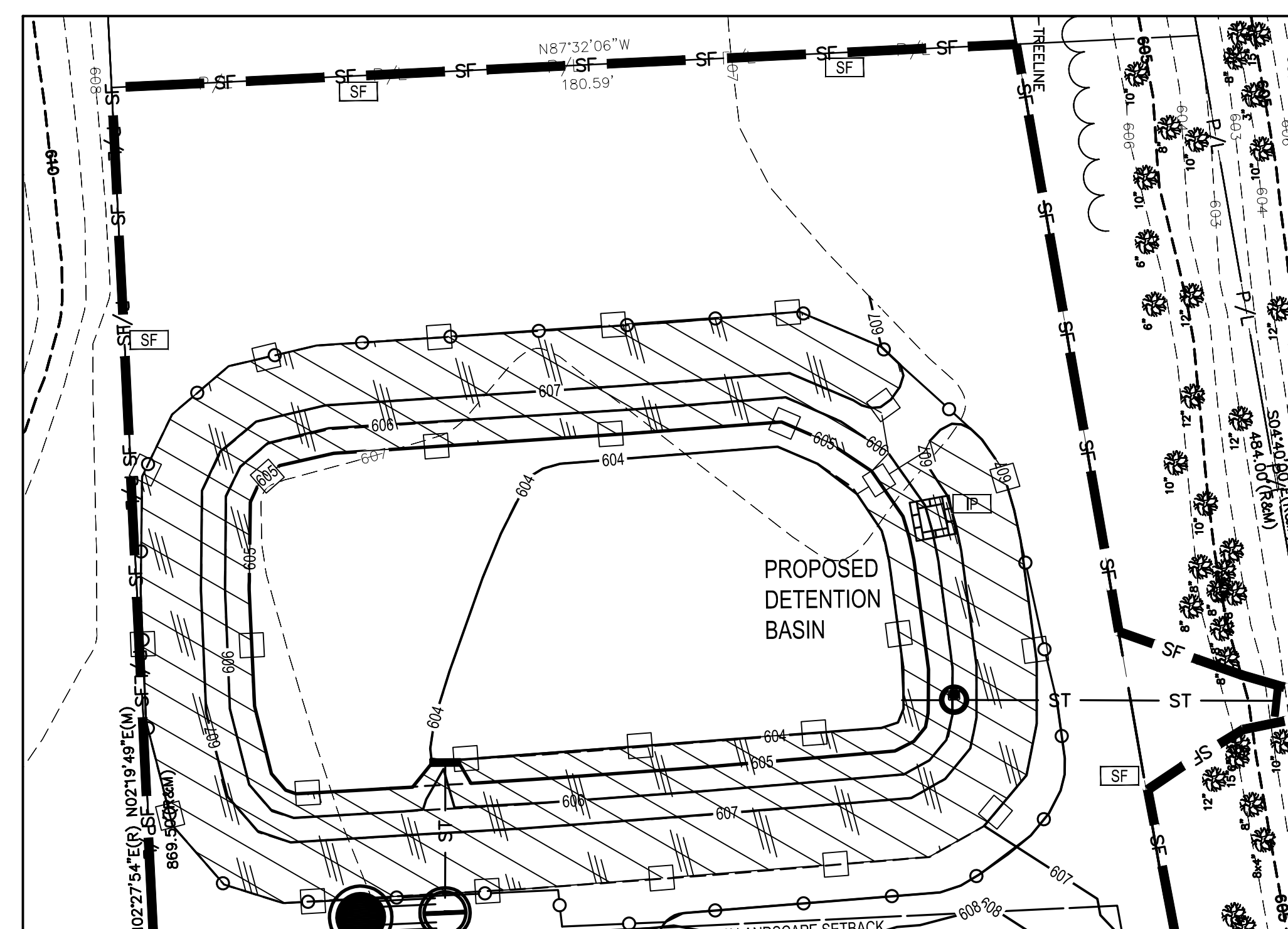


ENDEAVOR 2.0

SWPP  
PLAN

**C-012**

PLOT DATE:



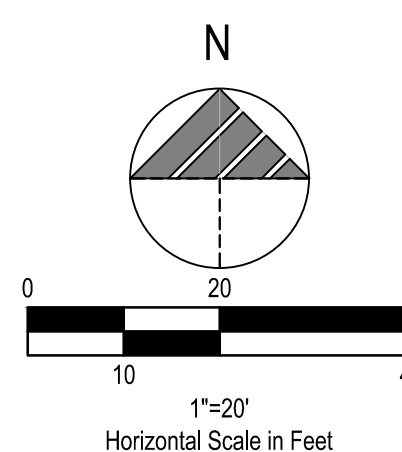
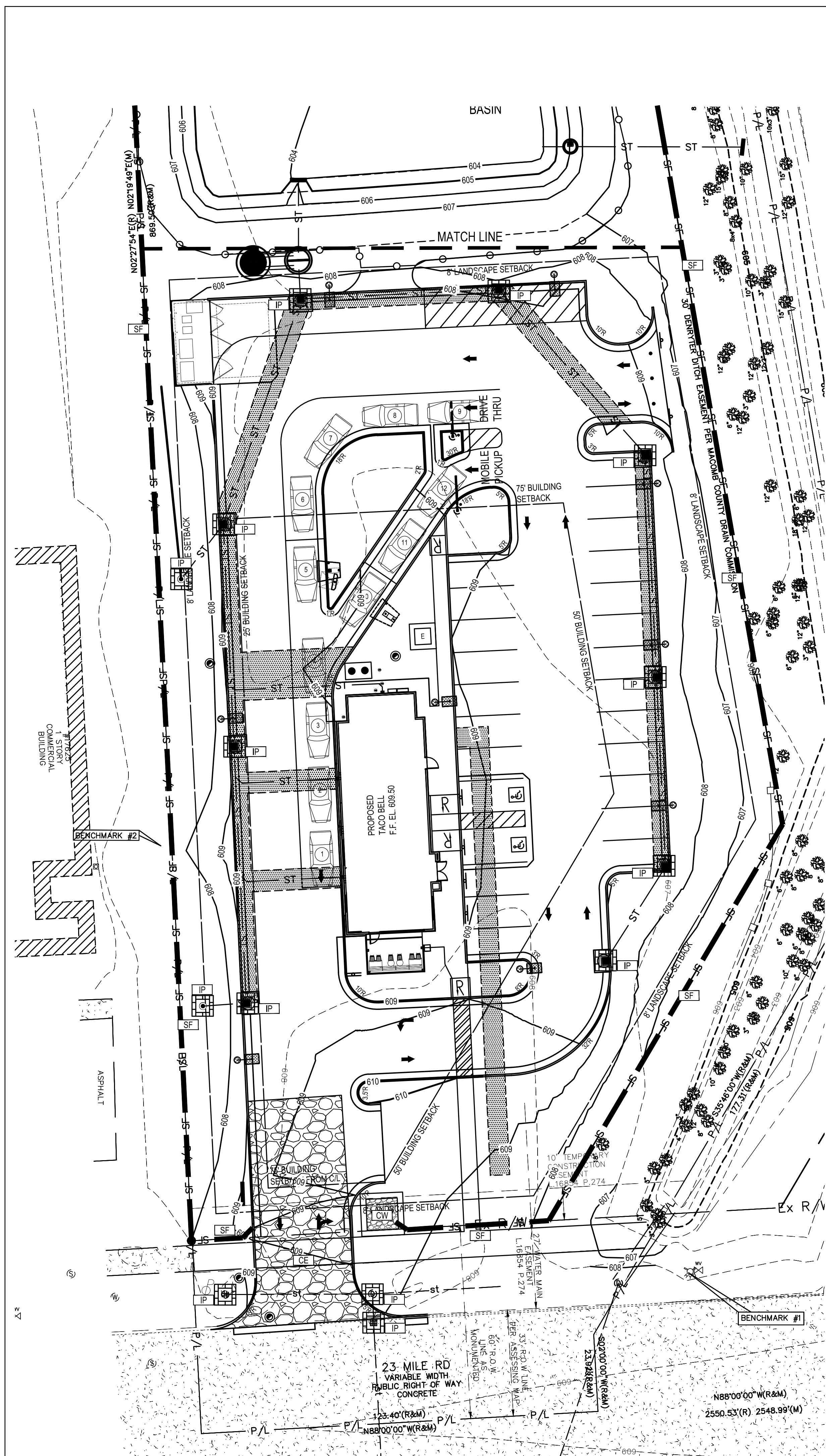
**LEGEND**

(SEE SHEET C-001 FOR GENERAL LEGEND)

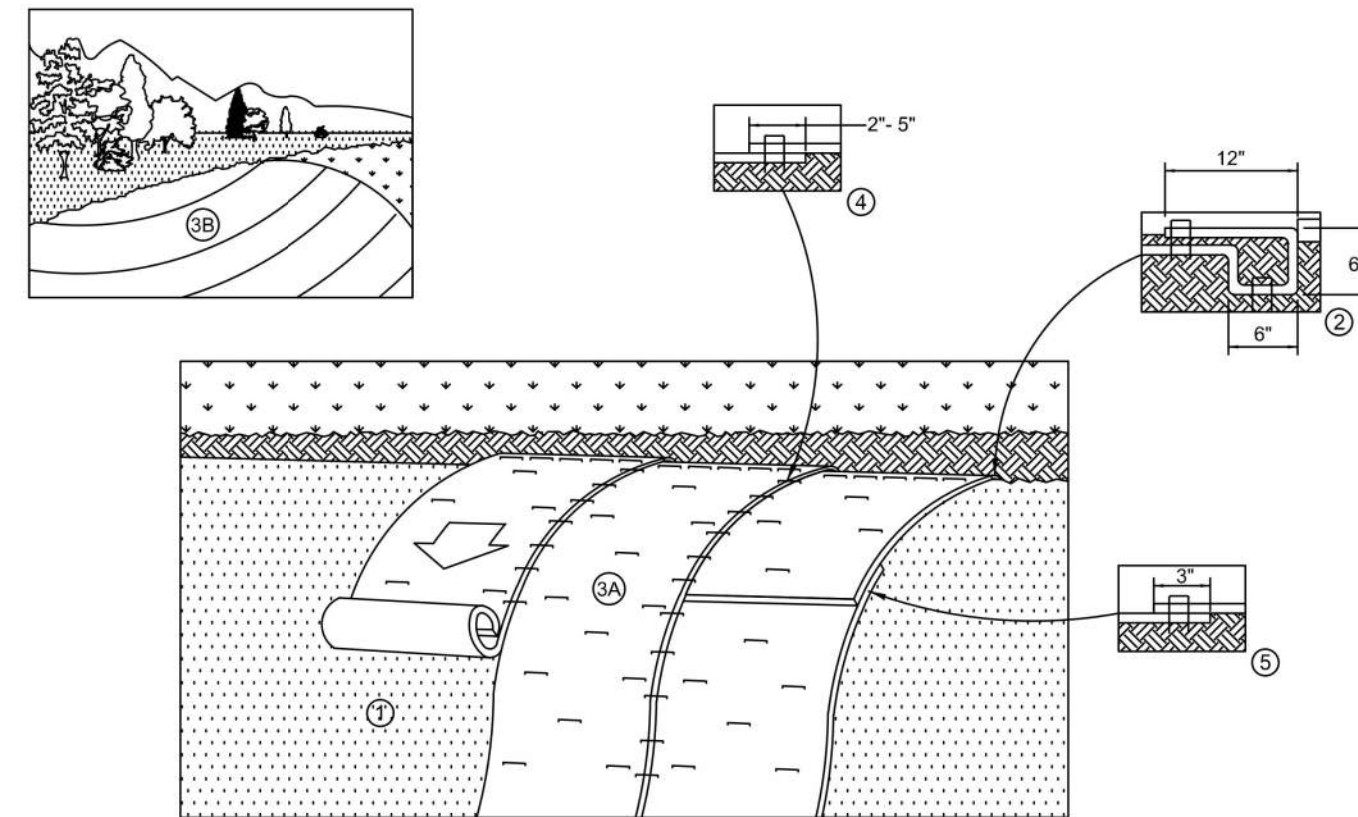
- PROPOSED SILT BARRIER REFER TO SWPP DETAILS
- PROPOSED SILT FENCE REFER TO SWPP DETAILS
- PROPOSED CONSTRUCTION ENTRANCE REFER TO SWPP DETAILS
- PROPOSED CONCRETE WASHOUT FACILITY REFER TO SWPP DETAILS
- MULCH BLANKET SLOPE INSTALLATION REFER TO DETAIL ON SHEET C-013

**SWPP KEYNOTES**

- CONCRETE WASHOUT AREA
- SILT FENCE
- CONSTRUCTION ENTRANCE
- INLET PROTECTION



**MULCH BLANKET SLOPE INSTALLATION**  
(SESC-15)



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (REC'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE REC'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF REC'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE REC'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" APART IN THE REC'S BACK OVER SEED AND COMPACTED SOIL. SECURE REC'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE REC'S.
3. ROLL THE REC'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. REC'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL REC'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE (SEE DETAIL SESC-16). WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN (SEE DETAIL SESC-16).
4. THE EDGES OF PARALLEL REC'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON REC'S TYPE.
5. CONSECUTIVE REC'S SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE REC'S WIDTH.

NOTE:  
\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE REC'S.

**MACOMB COUNTY PUBLIC WORKS**  
**SOIL EROSION AND SEDIMENTATION CONTROL NOTES:**

THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED, THE SOIL EROSION AND SEDIMENTATION CONTROL ACT AND THE MACOMB COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.

ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE MACOMB COUNTY PUBLIC WORKS OFFICE.

EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.

STAGING THE WORK WILL BE DONE BY THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH CHANGE.

THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF SOIL EROSION AND SEDIMENTATION CONTROL DEVICES.

THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS BEFORE AND AT ALL TIMES DURING CONSTRUCTION ON THIS PROJECT. ANY MODIFICATIONS OR ADDITIONS TO SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE COMPLIED WITH AS REQUIRED OR DIRECTED BY THE MACOMB COUNTY PUBLIC WORKS OFFICE.

IF ANY OF THE SESC MEASURES ON THE SITE ARE DEEMED INADEQUATE OR INEFFECTIVE, THE MACOMB COUNTY PUBLIC WORKS OFFICE SESC DIVISION HAS THE RIGHT TO REQUIRE ADDITIONAL SESC MEASURES AT THE EXPENSE OF THE LANDOWNER.

INSTALL A CRUSHED CONCRETE ACCESS DRIVE PLACED ON GEOTEXTILE FABRIC AS INDICATED ON THE PLAN. THE ACCESS DRIVE MUST BE A MINIMUM OF 12'X50'X6".

A. NEW LAYERS OF CRUSHED CONCRETE WILL BE ADDED AS OLD LAYERS BECOME COMPACTED.

INSTALL SILT FENCE AS INDICATED ON THE PLAN AND AT ADDITIONAL AREAS AS NECESSARY.

- A. SILT FENCE SHALL BE INSTALLED PER DETAIL.
- B. BUILD UP OF SEDIMENT SHALL BE REMOVED WHEN SEDIMENT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE SILT FENCE.
- C. IF SILT FENCE FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF EXPECTED USABLE LIFE AND THE BARRIER IS STILL REQUIRED, THE SILT FENCE SHALL BE REPLACED PROMPTLY.
- D. SILT FENCE SHALL BE INSPECTED WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF RAINFALL AND DAILY DURING A PROLONGED RAIN EVENT. REQUIRED MAINTENANCE SHALL BE PROVIDED PROMPTLY.

INSTALL INLET FILTER ON ALL PAVEMENT CATCH BASINS PER DETAIL.

- A. INLET FILTERS SHALL BE INSPECTED WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF A RAINFALL AND DAILY DURING A PROLONGED RAIN EVENT.
- B. BUILDUP OF SEDIMENT AND DEBRIS SHALL BE REMOVED PROMPTLY.
- C. IF FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF EXPECTED USABLE LIFE AND THE BARRIER IS STILL REQUIRED, THE FABRIC SHALL BE REPLACED PROMPTLY.

INSTALL DRAIN GUARD ON ALL CATCH BASINS PER DETAIL. SEED OR SOD THE AREA BETWEEN THE SILT FENCE AND THE INLET.

- A. DRAIN GUARDS SHALL BE INSPECTED WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF RAINFALL AND DURING A PROLONGED RAIN EVENT.
- B. BUILD UP OF SEDIMENT SHALL BE REMOVED WHEN SEDIMENT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE SILT FENCE.
- C. IF FABRIC DECOMPOSES OR BECOME INEFFECTIVE PRIOR TO THE END OF EXPECTED USABLE LIFE AND THE BARRIER IS STILL REQUIRED, THE SILT FENCE SHALL BE REPLACED PROMPTLY.

INLET SEDIMENT TRAPS AND ALL DITCH SEDIMENT TRAPS SHALL BE INSPECTED DAILY. THE SEDIMENT PITS SHALL BE CLEANED OUT WHEN HALF FULL, OR AS DIRECTED BY THE MACOMB COUNTY PUBLIC WORKS OFFICE.

DETENTION/RETENTION/SILTATION PONDS.

- A. INSTALL SILT FENCE AROUND TOP OF BANK OF DETENTION POND.
- B. SEED/MULCH BANKS USING MULCH BLANKET OF POND IMMEDIATELY AFTER EXCAVATION. ALL PONDS MUST BE STABILIZED PRIOR TO BEING PLACED IN SERVICE.
- C. THE POND MUST BE CLEANED OF SEDIMENT AND OTHER DEBRIS PRIOR TO FINALIZATION OF THE PERMIT. ANY AREAS LACKING VEGETATION MUST BE REPAIRED BEFORE FINAL APPROVAL FOR THE PROJECT IS GRANTED.

UTILITIES AND PUMP STATION

- A. THE ROAD RIGHT OF WAY MUST BE SEEDED AND MULCHED WITHIN 5 DAYS AFTER UTILITIES HAVE BEEN INSTALLED. IF THIS IS NOT POSSIBLE, ALL SESC MEASURES MUST STAY IN PLACE AND MUST BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED.

ALL STOCKPILED SOILS SHALL BE MAINTAINED IN SUCH A WAY AS TO PREVENT EROSION FROM LEAVING THE SITE. IF THE STOCKPILE WILL BE ON SITE FOR MORE THAN 30 DAYS, THEN THE STOCKPILE MUST BE SEEDED. SILT FENCE MUST BE INSTALLED AROUND THE PERIMETER OF THE STOCKPILE.

IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDED AREAS WITH UNWEATHERED SMALL GRAIN STRAW, SPREAD UNIFORMLY AT THE RATE OF 1 TO 2 TONS PER ACRE OR 100 POUNDS (2-3 BALES) PER 1000 SQUARE FEET. THIS MULCH SHOULD BE ANCHORED WITH DISC TYPE MULCH ANCHORING TOOL OR OTHER MEANS AS APPROVED BY THE MACOMB COUNTY PUBLIC WORKS OFFICE. MULCH MATTING MAY BE USED IN LIEU OF LOOSE MULCH.

IF ANY DEWATERING IS NEEDED, IT SHALL BE DISCHARGED THROUGH A FILTER BAG OVER A WELL-VEGETATED AREA. THE PUMP MUST DISCHARGE AT A NON-EROSIVE VELOCITY. IF NECESSARY, AN APPROVED ENERGY DISSIPATER MAY BE USED.

ALL DIRT TRACKED ONTO ANY ROADWAY SHALL BE REMOVED IMMEDIATELY.

STREETS AND OR PARKING AREAS WILL BE SCRAPED ON A DAILY BASIS AND SWEEP AT A MINIMUM OF ONCE PER WEEK BY THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE.

DURING DRY PERIODS, ALL DISTURBED AREAS SHALL BE WATERED FOR DUST CONTROL.

PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER EARTH CHANGE ACTIVITY CEASES, TEMPORARILY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. ALL TEMPORARY SOIL EROSION CONTROL SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.

FINAL GRADE, ESTABLISH VEGETATION AND OR LANDSCAPE ALL DISTURBED AREAS NOT BUILT OR PAVED UPON.

REMOVE ALL TEMPORARY SOIL EROSION DEVICES AFTER PERMANENT STABILIZATION IS ESTABLISHED.



FOR  
REFERENCE  
ONLY

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2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END, MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY.: EA  
JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
Macomb, MI 48042



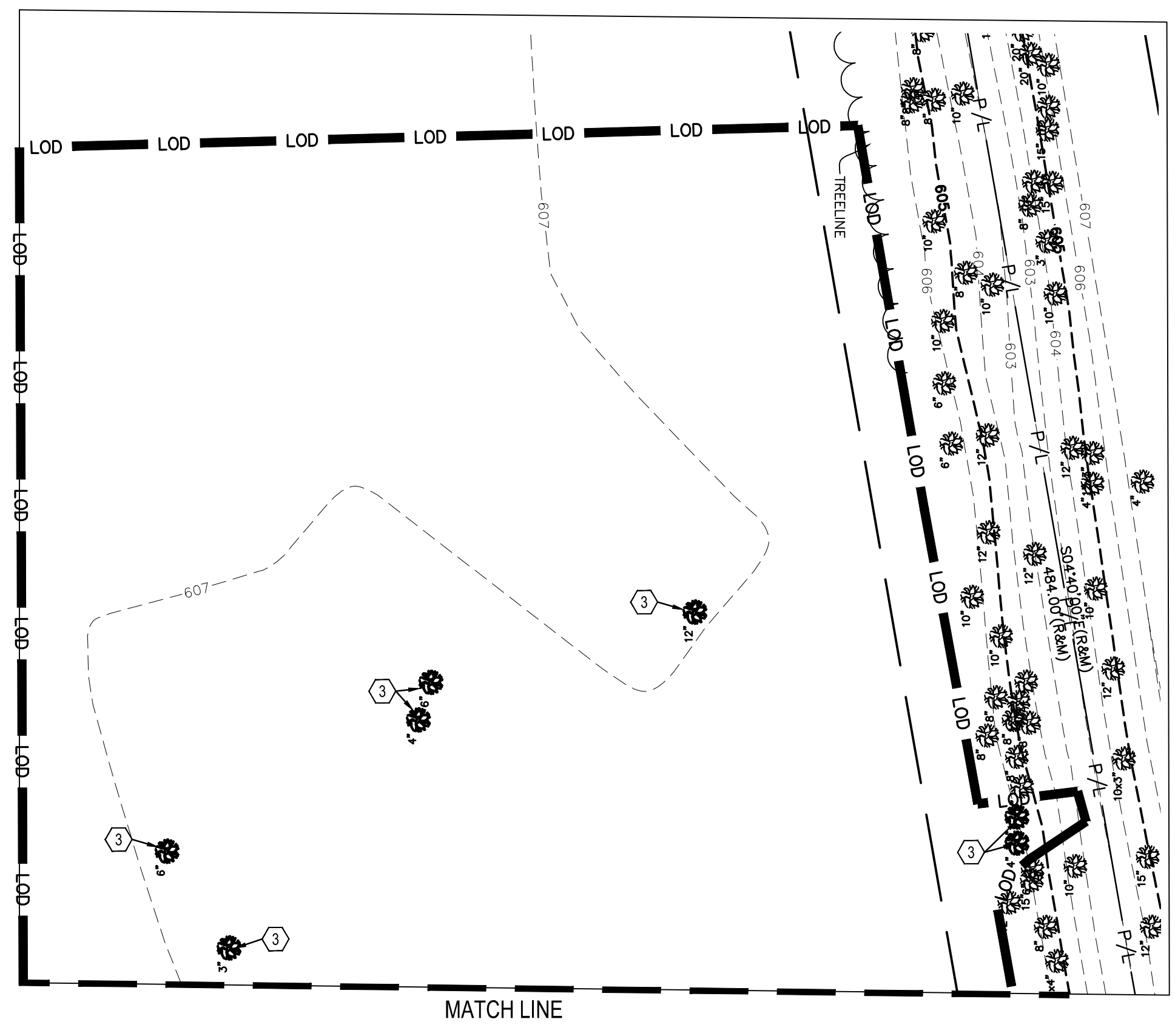
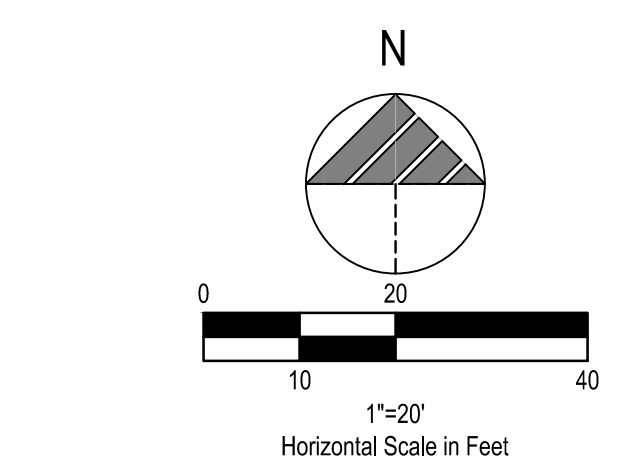
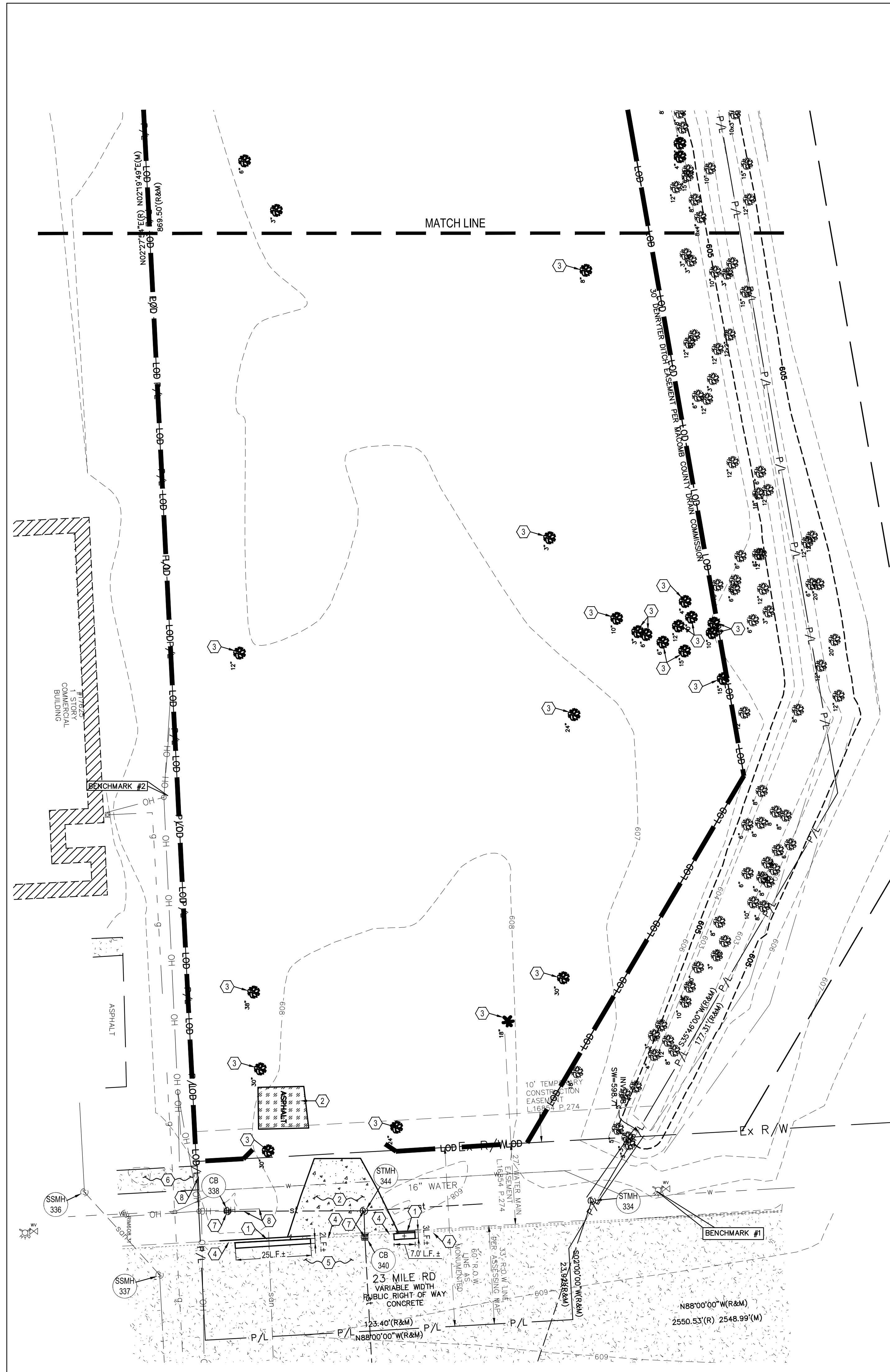
ENDEAVOR 2.0  
MACOMB COUNTY PUBLIC  
WORKS SOIL EROSION  
NOTES AND DETAILS

**C-013**

PLOT DATE:







- PLAN KEYNOTES**
- EXISTING CURB/GUTTER TO BE REMOVED.
  - EXISTING ASPHALT / CONCRETE APRON TO BE REMOVED.
  - EXISTING LANDSCAPING (INCLUDING BUSHES, TREES, ETC.) TO BE REMOVED.
  - EXISTING CURB/GUTTER TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.
  - EXISTING PAVEMENT TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.
  - EXISTING WALK TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION. REMOVE AND REPLACE ANY DAMAGED WALK AREAS.
  - EXISTING UTILITIES TO REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.
  - EXISTING GUY WIRES TO BE RELOCATED PER UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY.

**DEMOLITION NOTE:**  
 ALL EXISTING SITE AND SURROUNDING FEATURES SUCH AS UTILITIES, PAVEMENT, CURB, LANDSCAPING, ETC. SHALL REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION UNLESS NOTED OTHERWISE, OR ARE REQUIRED TO BE MODIFIED OR REMOVED FOR THE INSTALLATION OF PROPOSED IMPROVEMENTS. ALL DISTURBED FEATURES SHALL BE RESTORED OR RELOCATED AS REQUIRED TO THE SATISFACTION OF THE OWNER. CONTRACTOR SHALL REPAIR/REPLACE ANY SURROUNDING FEATURES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.

**LEGEND**  
 (SEE SHEET C-001 FOR GENERAL LEGEND)

- EXISTING ASPHALT TO BE REMOVED
- EXISTING CONCRETE TO BE REMOVED
- DENOTES LIMITS OF SAWCUT
- DEMOLITION KEYNOTE
- LIMITS OF DISTURBANCE

EXISTING STRUCTURES	
STRUCT. ID	STRUCTURE DETAILS
STMH 334	EXISTING STORM SEWER MANHOLE RM = 608.44 BOTTOM OF STRUCTURE = 599.24 TOP OF WATER = 602.79
SSMH 336	EXISTING SANITARY SEWER MANHOLE RM = 608.81 INV. 8" (SE) = 598.06 INV. 8" (N) = 598.11
SSMH 337	EXISTING SANITARY SEWER MANHOLE RM = 608.26 BOLTED COULD NOT OPEN
CB 338	EXISTING CATCH BASIN RM = 606.87 INV. 12" (E) = 602.22
CB 340	EXISTING CATCH BASIN RM = 608.31 INV. 12" (N) = 602.61 INV. 12" (S) = 603.11
STMH 344	EXISTING STORM SEWER MANHOLE RM = 608.48 INV. 24" (E) = 602.53 INV. 12" (S) = 602.63 INV. 12" (W) = 602.78

**BENCHMARKS AND BASIS OF BEARING:**  
 NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.

**BENCHMARK #1**  
 ARROW ON FIRE HYDRANT, EAST OF EAST PROPERTY LINE, NORTH SIDE OF 23 MILE RD.  
 ELEVATION = 611.36' (NAVD 88)

**BENCHMARK #2**  
 MAG NAIL IN NORTH MOST UTILITY POLE BY WEST PROPERTY LINE.  
 ELEVATION = 608.83' (NAVD 88)



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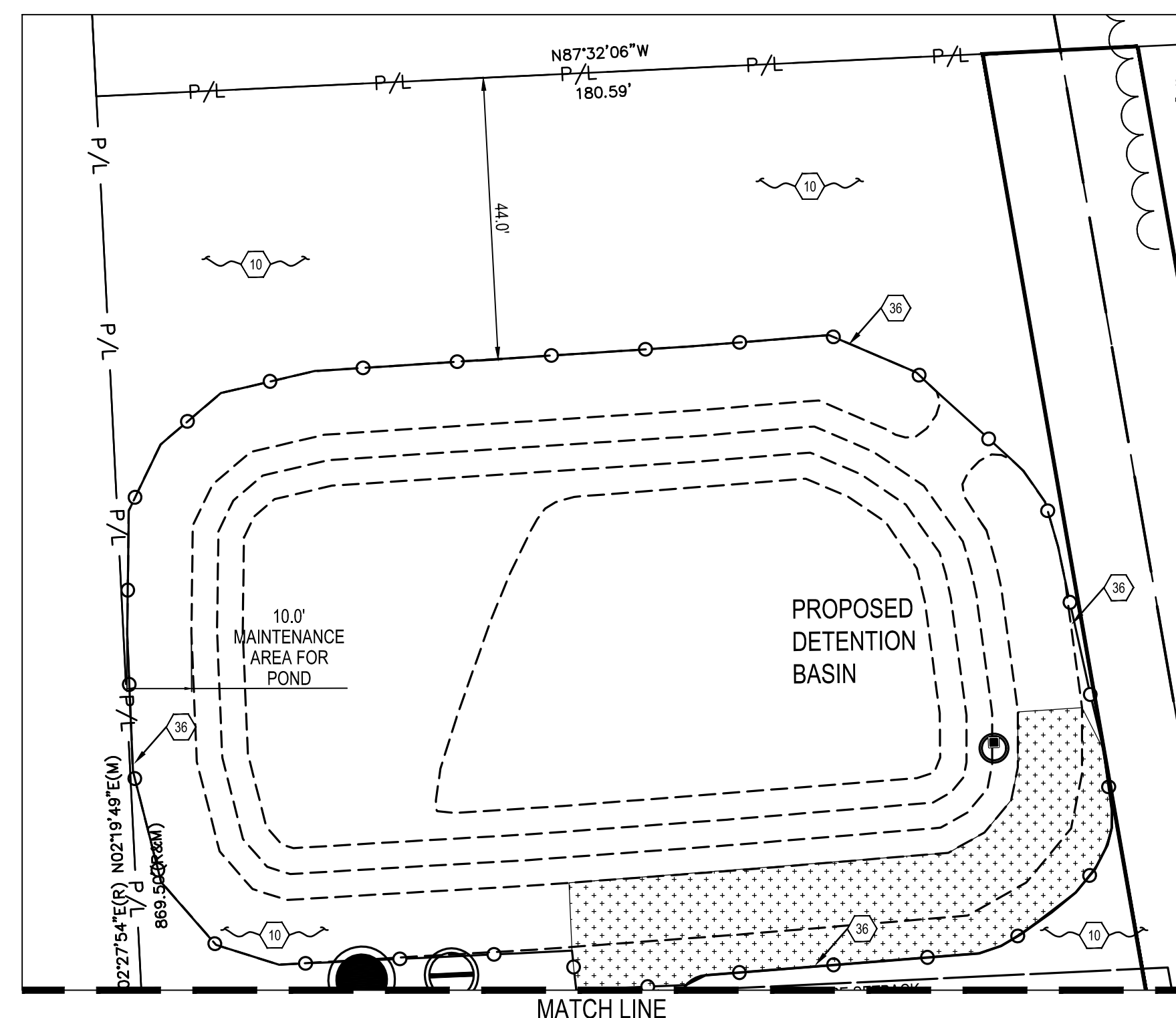
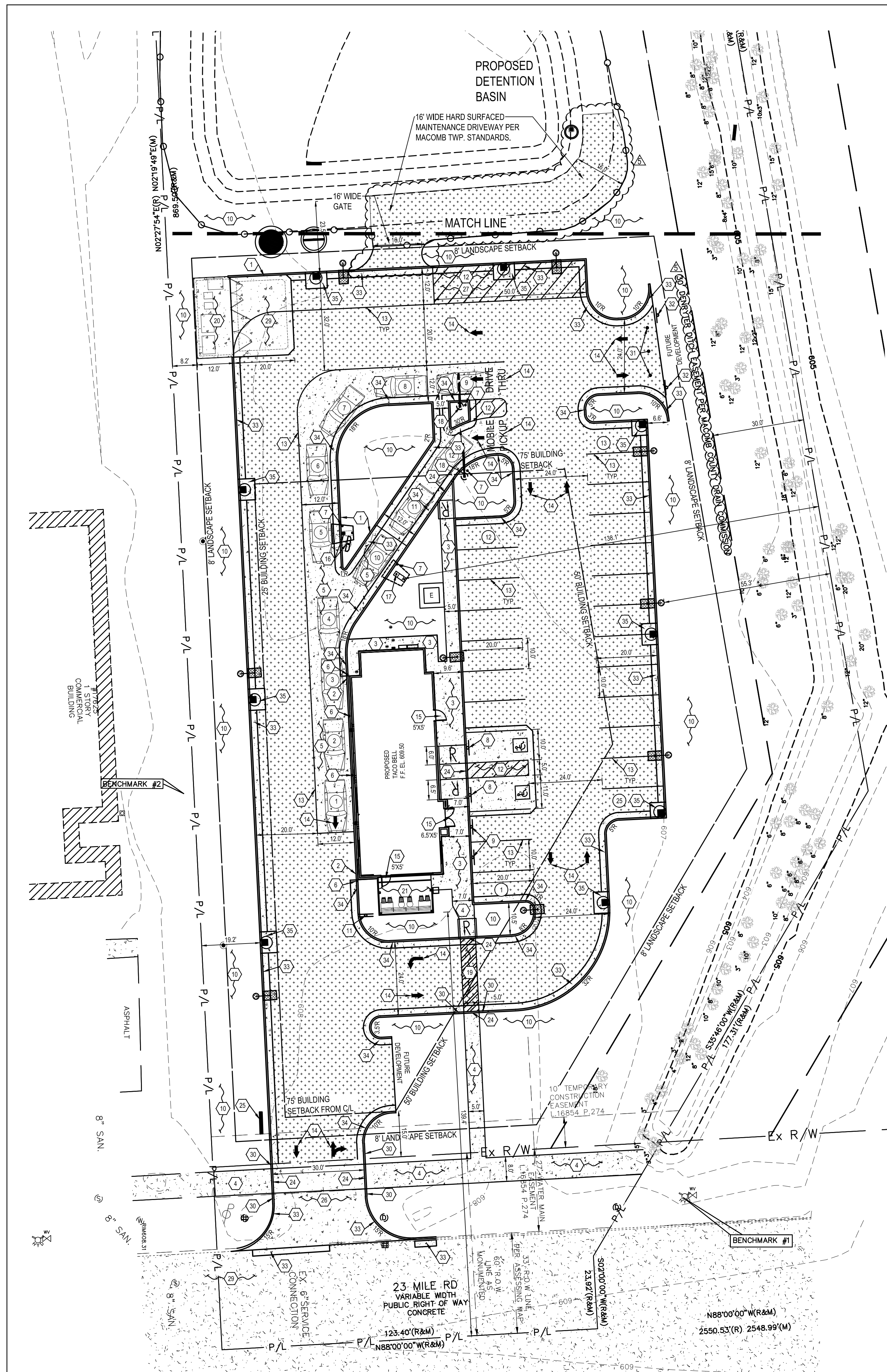
ENDEAVOR 2.0

DEMOLITION PLAN

**C-101**



PLOT DATE:



**LEGEND**  
(SEE SHEET C-001 FOR GENERAL LEGEND)

- PROPOSED ASPHALT PAVEMENT PER MACOMB TOWNSHIP PAVING DETAILS. SEE SHEET C-506.
- PROPOSED CONCRETE
- CONSTRUCTION KEYNOTE
- PROPOSED PARKING SPACE NUMBER
- PROPOSED DRIVE THRU STACK CAR AND NUMBER
- PROPOSED ADA ACCESSIBLE RAMP PER PER MACOMB COUNTY STANDARDS AND SPECIFICATIONS. SEE SHEET C-507
- PROPOSED PAINTED INTERNATIONAL ADA SYMBOL PER ADA SPECIFICATIONS. SEE SHEET C-502
- PROPOSED UTILITY STRUCTURES.

**NOTE:**

- PER FEMA MAP 26099C0237G EFFECTIVE DATE SEPTEMBER 29, 2006, THE PROPOSED PROPERTY IS IN ZONE X, AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- DEVELOPER SHALL BE RESPONSIBLE TO INSTALL AND MAINTAIN ALL SIDEWALKS WITHIN THE PROPERTY LIMITS AND IN FRONT OF PROPERTY.

**MACOMB TOWNSHIP STANDARD NOTES**

- NOTIFY THE MACOMB TOWNSHIP BUILDING DEPARTMENT (586-992-0710) AND WATER AND SEWER DEPARTMENT (586-598-0687) A MINIMUM OF 48-HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL CONSTRUCTION MUST BE CONFORMING TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY MACOMB TOWNSHIP.
- CALL MISS DIG (1-800-482-7171) A MINIMUM OF 72-HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ONSITE.
- ALL EXCAVATION UNDER OR WITHIN 3-FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED, SHALL BE BACKFILLED AND COMPACTED WITH SAND (CLASS II MDT - MINIMUM).
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL MACOMB TOWNSHIP PERMITS INCLUDING A PERMIT TO OCCUPY PUBLIC UTILITY EASEMENTS AND PUBLIC RIGHTS-OF-WAY.
- TRENCH BACKFILL IN COUNTY RIGHTS-OF-WAY SHALL CONFORM TO MCDOR REQUIREMENTS AND BE SUBJECT TO THE APPROVAL OF THE MCDOR ENGINEER.
- CONTACT THE OFFICE OF THE MACOMB COUNTY PUBLIC WORKS COMMISSIONER AT 586-469-5325, 48-HOURS BEFORE CONSTRUCTION.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE TO STORM WATER OUTLETS ON SITE TO ELIMINATE STANDING WATER IN VACANT AREAS DURING CONSTRUCTION OF THE DEVELOPMENT. THIS INCLUDES CONSTRUCTION OF ALL INDIVIDUAL HOMES/UNITS WITHIN RESIDENTIAL DEVELOPMENTS.



**PLAN KEYNOTES (#)**

- NOT USED.
- PROPOSED CONCRETE CURB AT DRIVE THRU. SEE SHEET C-501
- PROPOSED CONCRETE INTERGRAL WALK/CURB PER MACOMB TOWNSHIP PAVING DETAILS. SEE SHEET C-506.
- PROPOSED CONCRETE WALK PER MACOMB TOWNSHIP PAVING DETAILS. SEE SHEET C-506.
- PROPOSED LIGHT DUTY 8" P.C.C. PAVEMENT WITH W.W.F. 6" X 6" - W2.9 X W2.9 CENTERED (CONTROL JTS. 12'-0" O.C.) OVER 6" CRUSHED AGGREGATE BASE COURSE (MOOT 21AA) - APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT. SEE SHEET C-506
- PROPOSED DETERRENT BOLLARD IN CURB. SEE SHEET C-501.
- PROPOSED DETERRENT BOLLARD. SEE SHEET C-501.
- PROPOSED HANDICAPPED PARKING SIGN. SEE SHEET C-502.
- PROPOSED MOBILE ORDER PICK-UP SIGN, IN BOLLARD. CONTRACTOR TO INSTALL SIGN POST AND BOLLARD PER THE HANDICAP SIGN DETAIL. SIGN TO BE PROVIDED BY SIGN VENDOR.
- PROPOSED LANDSCAPING AREA
- PROPOSED "DO NOT ENTER" AND "STOP" SIGN PER MOOT STANDARDS. SEE SHEET C-501.
- PROPOSED PAINTED TRANSVERSE STRIPING. SEE SHEET C-501.
- PROPOSED PAINTED 4" WIDE SOLID STRIPE - WHITE ON ASPHALT, YELLOW ON CONCRETE, AND BLUE IN ADA AREAS. SEE SHEET C-501.
- PROPOSED DIRECTIONAL PAVEMENT MARKINGS - WHITE ON ASPHALT, YELLOW ON CONCRETE. SEE SHEET C-501.
- PROPOSED FROST SLAB AT DOOR. SEE STRUCTURAL PLANS FOR DETAILS.
- PROPOSED MENU BOARD AND ORDER CONFIRMATION BOARD INCLUDING SENSOR LOOP PER SIGN SUPPLIER SPECIFICATIONS. SIGN SUPPLIER TO PROVIDE A TEMPLATE FOR G.C. G.C. TO COORDINATE A MEETING WITH THE CONSTRUCTION/PROJECT MANAGER AND OPERATIONS TO VERIFY LOCATION AND PLACEMENT OF MENU BOARD AND ORDER CONFIRMATION BOARD PRIOR TO ANY CONSTRUCTION. SIGN SUPPLIER SHALL PROVIDE G.C. WITH FOUNDATION DETAILS. G.C. RESPONSIBLE FOR SIGN FOUNDATIONS/ELECTRICAL. SEE SHEET C-503.
- PROPOSED ORDER CONFIRMATION BOARD INCLUDING SENSOR LOOP PER SIGN SUPPLIER SPECIFICATIONS. SIGN SUPPLIER TO PROVIDE A TEMPLATE FOR G.C. G.C. TO COORDINATE A MEETING WITH THE CONSTRUCTION/PROJECT MANAGER AND OPERATIONS TO VERIFY LOCATION AND PLACEMENT OF MENU BOARD AND ORDER CONFIRMATION BOARD PRIOR TO ANY CONSTRUCTION. SIGN SUPPLIER SHALL PROVIDE G.C. WITH FOUNDATION DETAILS. G.C. RESPONSIBLE FOR SIGN FOUNDATIONS/ELECTRICAL. SEE SHEET C-503.
- PROPOSED EVOLUTION PORTAL CLEARANCE BAR. SEE SHEET C-503.
- PROPOSED CROSSWALK. SEE SHEET C-501
- PROPOSED DUMPSTER ENCLOSURE WITH ASSOCIATED CONCRETE PAD. SEE PER MACOMB TOWNSHIP PAVING DETAILS. SEE SHEET C-506
- PROPOSED PATIO AND ASSOCIATED ITEMS INCLUDING FENCE. CONTRACTOR SHALL COORDINATE A MEETING WITH THE CONSTRUCTION MANAGER TO VERIFY TYPE, LOCATION AND PLACEMENT OF FENCE PRIOR TO ANY CONSTRUCTION. OUTDOOR SEATING PER CONSTRUCTION MANAGER SPECIFICATIONS.
- NOT USED.
- NOT USED.
- PROPOSED FLUSHED CURB. SEE SHEET C-501.
- PROPOSED MONUMENT SIGN PER SIGN SUPPLIER SPECIFICATIONS. SIGN SUPPLIER SHALL DESIGN AND INSTALL FOUNDATION.
- PROPOSED CONCRETE DRIVEWAY APRON PER MACOMB TOWNSHIP PAVING DETAILS. SEE SHEET C-506
- PROPOSED 12 BY 50' LOADING / UNLOADING ZONE.
- NOT USED.
- PROPOSED HEAVY DUTY 8" P.C.C. PAVEMENT WITH W.W.F. 6" X 6" - W2.9 X W2.9 CENTERED (CONTROL JTS. 12'-0" O.C.) OVER 6" CRUSHED AGGREGATE BASE COURSE (MOOT 21AA) - APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT. SEE SHEET C-506.
- PROPOSED CURB TAPER. SEE SHEET C-502.
- PROPOSED TEMPORARY PORTABLE CONCRETE BOLLARDS.
- PROPOSED "NO EXIT" SIGN. SEE SHEET C-501.
- PROPOSED CONCRETE CURB AND GUTTER PER MACOMB TOWNSHIP PAVING DETAILS. SEE SHEET C-506.
- PROPOSED CONCRETE CURB AND GUTTER (REVERSE PITCH) PER MACOMB TOWNSHIP PAVING DETAILS. SEE SHEET C-506.
- PROPOSED CONCRETE COLLAR. SEE SHEET C-501.
- PROPOSED 6.0' HIGH WROUGHT-IRON STYLE DECORATIVE FENCE WITH DOUBLE OPENING ACCESS GATE 16 FEET WIDE MINIMUM PER MACOMB TWP. REQUIREMENTS.

**PROPERTY DESCRIPTION (Part of P.P. # 08-17-451-002)**

LAND SITUATED IN THE TOWNSHIP OF MACOMB, COUNTY OF MACOMB, STATE OF MICHIGAN, AND DESCRIBED AS:

A PART OF LAND LOCATED IN AND BEING PART OF THE SOUTHEAST 1/4 OF SECTION 17, TOWN 3 NORTH, RANGE 13 EAST, MACOMB TOWNSHIP, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT A POINT 2550.53 FEET NORTH 88 DEGREES 00 MINUTES WEST OF THE SOUTHEAST CORNER OF SAID SECTION 17; THENCE EXTENDING NORTH 88 DEGREES 00 MINUTES WEST 123.40 FEET ALONG THE SOUTHERLY LINE OF SAID SECTION 17; THENCE NORTH 02 DEGREES 27 MINUTES 54 SECONDS EAST 869.50 FEET; THENCE ALONG THE CENTER LINE OF A DRAIN, THE FOLLOWING COURSES AND DISTANCES: SOUTH 51 DEGREES 29 MINUTES EAST 82.60 FEET; THENCE SOUTH 26 DEGREES 39 MINUTES EAST 191.76 FEET; THENCE SOUTH 04 DEGREES 40 MINUTES EAST 484.00 FEET; THENCE SOUTH 35 DEGREES 46 MINUTES WEST 177.31 FEET; THENCE SOUTH 02 DEGREES 00 MINUTES WEST 23.92 FEET TO THE POINT OF BEGINNING CONTAINING THEREIN 2.170 ACRES OF LAND.

BUILDING SETBACKS		PARKING SPACES	
	REQUIRED	PROVIDED	
FRONT: 23 MILE RD.	75' FROM C/L	138.4'	28
RIGHT SIDE: EAST	50'	70.8'	25
BACK: NORTH	75'	14.5'	
LEFT SIDE: WEST	25'	11.8'	
LANDSCAPE SETBACKS		LAND USE DATA	
	REQUIRED	PROVIDED	
FRONT: 23 MILE RD.	8.0'	81.2'	% OF SITE AREA
RIGHT SIDE: EAST	8.0'	17.0'	2.30%
BACK: NORTH	8.0'	14.4'	47.00%
LEFT SIDE: WEST	8.0'	21.2'	50.70%
PARKING SETBACKS		TOTAL	
	REQUIRED	PROVIDED	2.17 AC.
FRONT: 23 MILE RD.	75.0'	81.2'	
RIGHT SIDE: EAST	8.0'	17.0'	
BACK: NORTH	8.0'	14.4'	
LEFT SIDE: WEST	8.0'	21.2'	

**BENCHMARKS AND BASIS OF BEARING:**  
NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.

**BENCHMARK #1**  
ARROW ON FIRE HYDRANT. EAST OF EAST PROPERTY LINE, NORTH SIDE OF 23 MILE RD.  
ELEVATION = 611.36' (NAVD 88)

**BENCHMARK #2**  
MAG NAIL IN NORTH MOST UTILITY POLE BY WEST PROPERTY LINE.  
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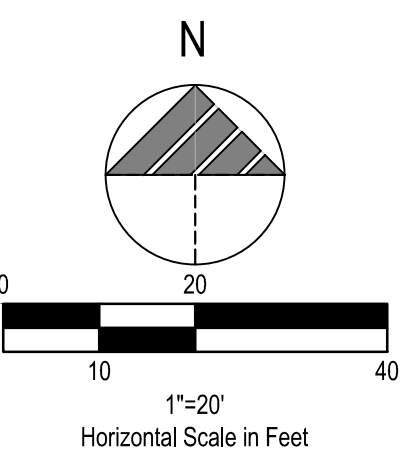
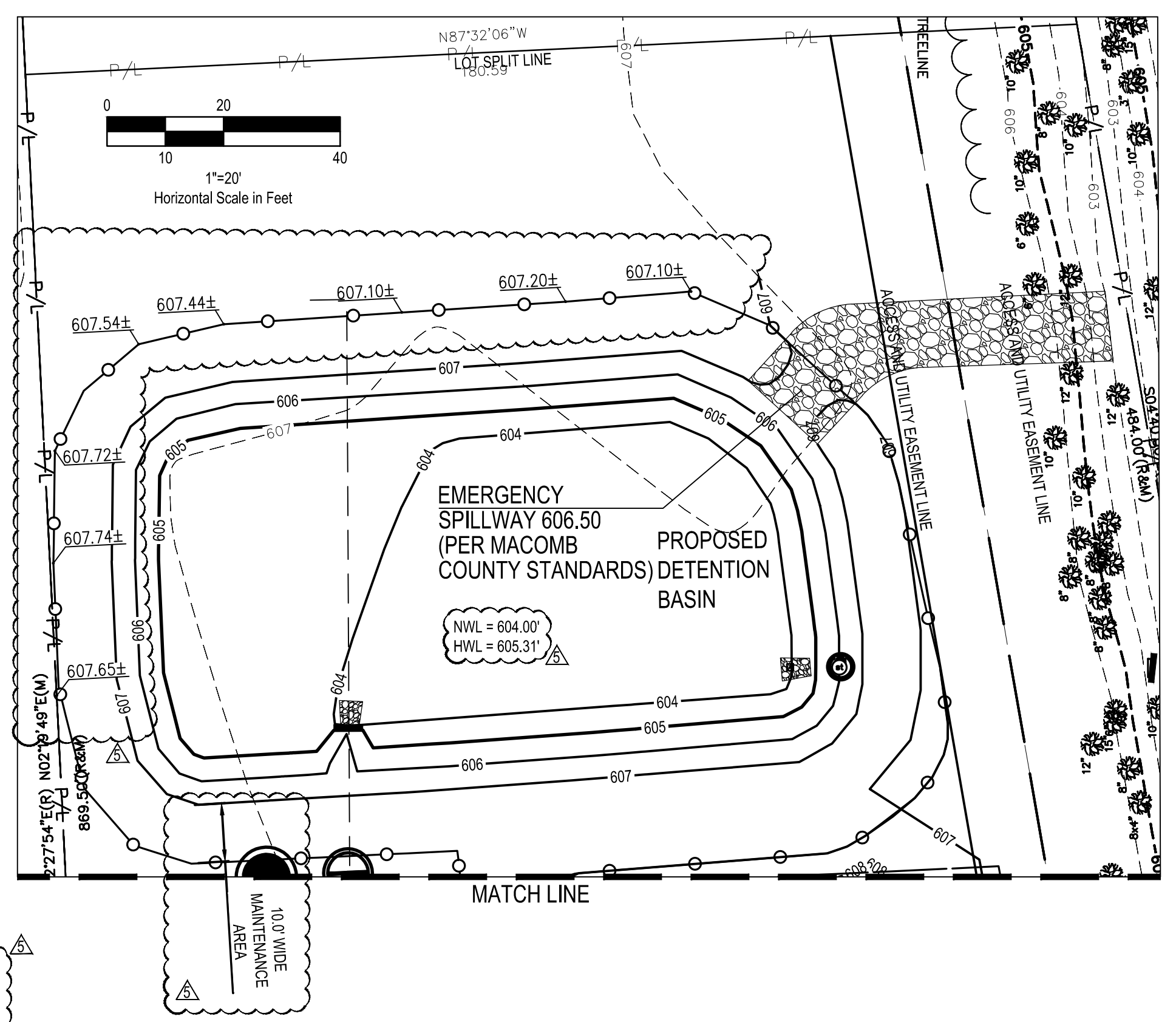
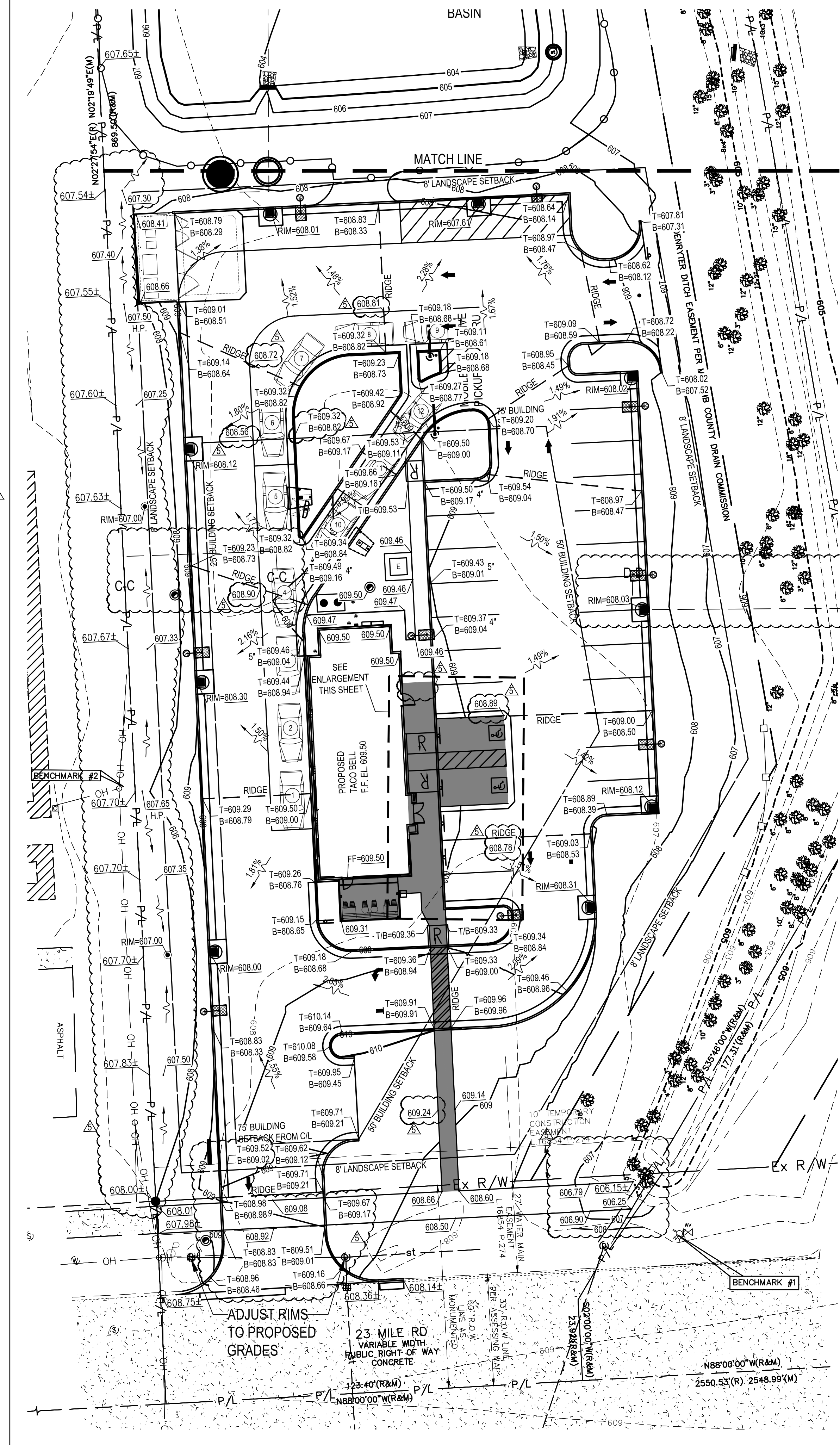
17669 23 Mile Road  
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ENDEAVOR 2.0

SITE PLAN

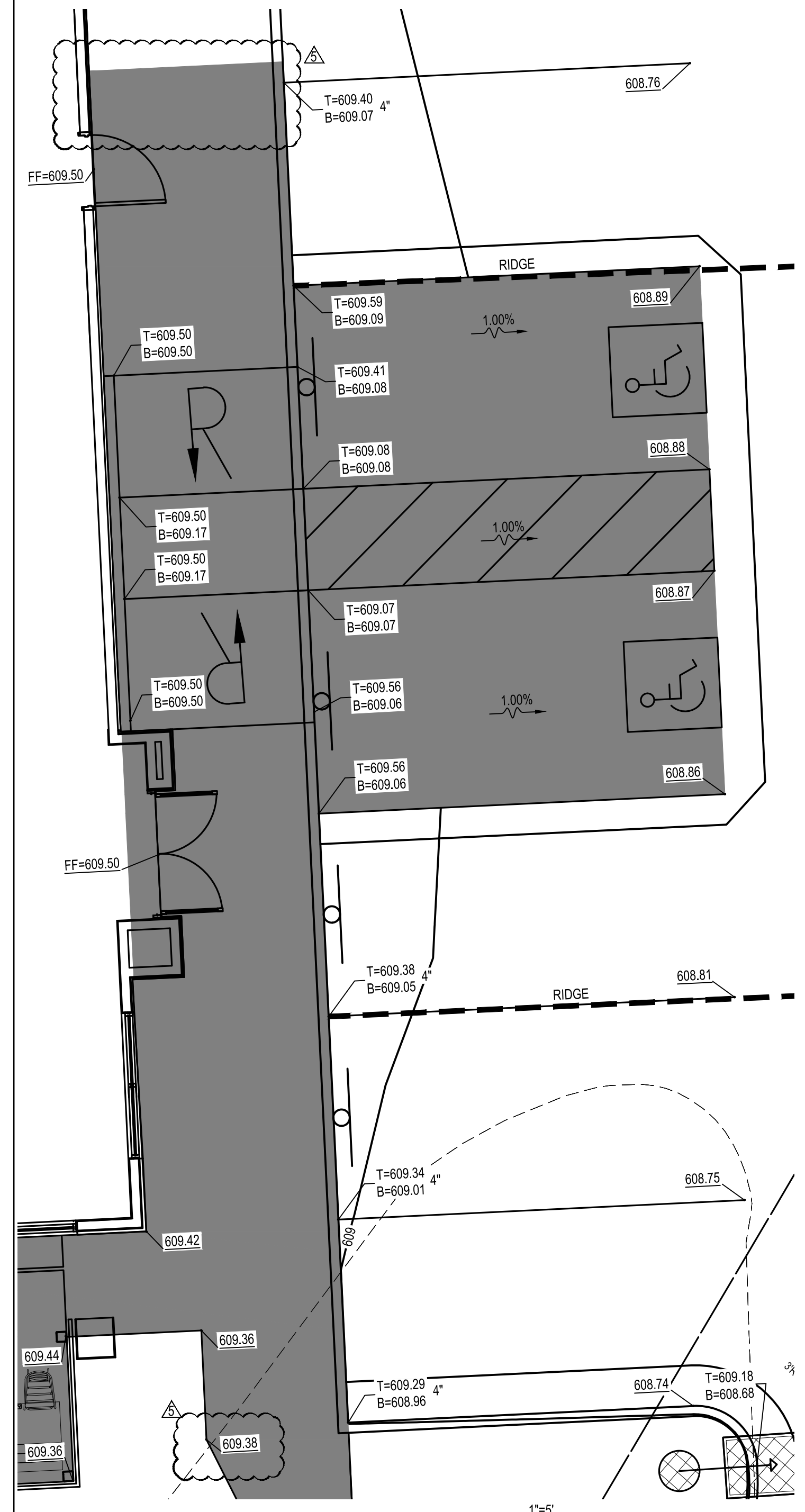
**C-111**

PLOT DATE:



**LEGEND**  
(SEE SHEET C-001 FOR GENERAL LEGEND)

000	PROPOSED CONTOUR
XXX.XX±	EXISTING SPOT ELEVATION/ MATCH EXISTING GRADE
XXX.XX	PROPOSED ELEVATION @ FINISHED GROUND ELEVATION
T=XXX.XX B=XXX.XX	TOP OF CURB ELEVATION BOTTOM OF CURB/FINISHED PAVEMENT ELEVATION
0.0%	PROPOSED DRAINAGE SLOPE & DIRECTION
⊕	PROPOSED ELEVATION KEYNOTE
[Hatched Area]	LIMITS OF ADA ROUTING



**BENCHMARKS AND BASIS OF BEARING:**  
NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.

**BENCHMARK #1**  
ARROW ON FIRE HYDRANT, EAST OF EAST PROPERTY LINE, NORTH SIDE OF 23 MILE RD. ELEVATION = 611.36' (NAVD 88)

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BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
Macomb, MI 48042

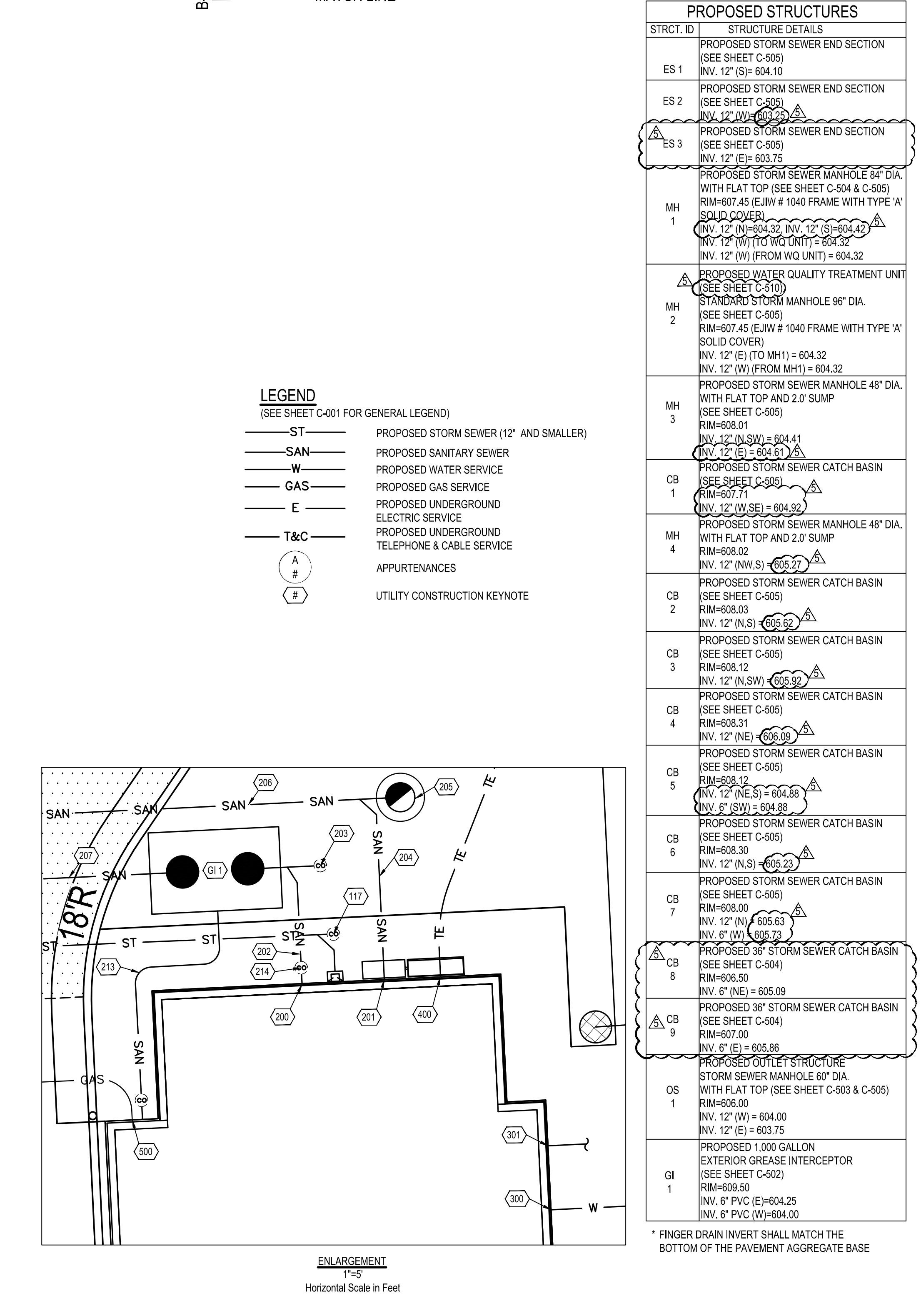
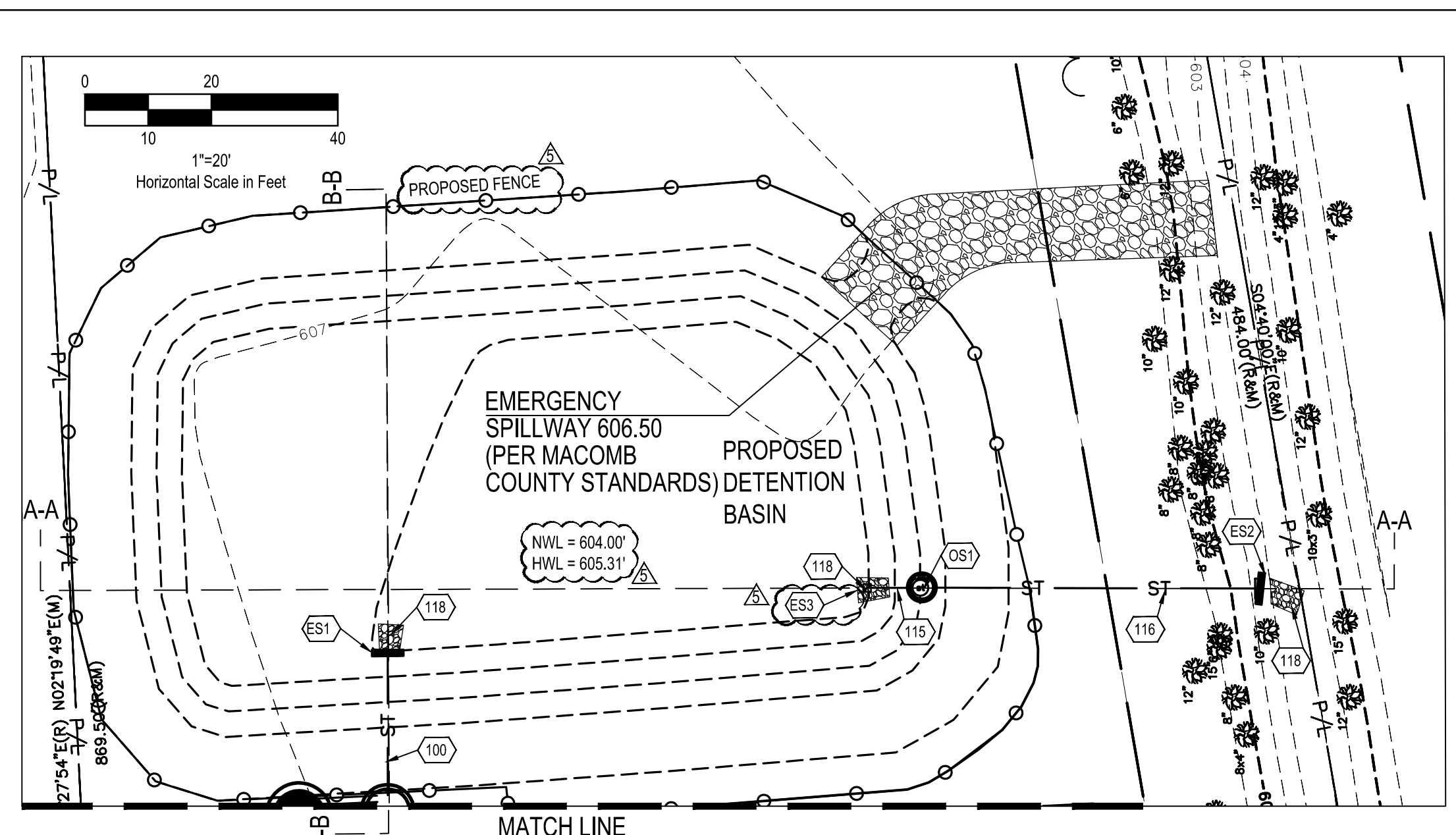
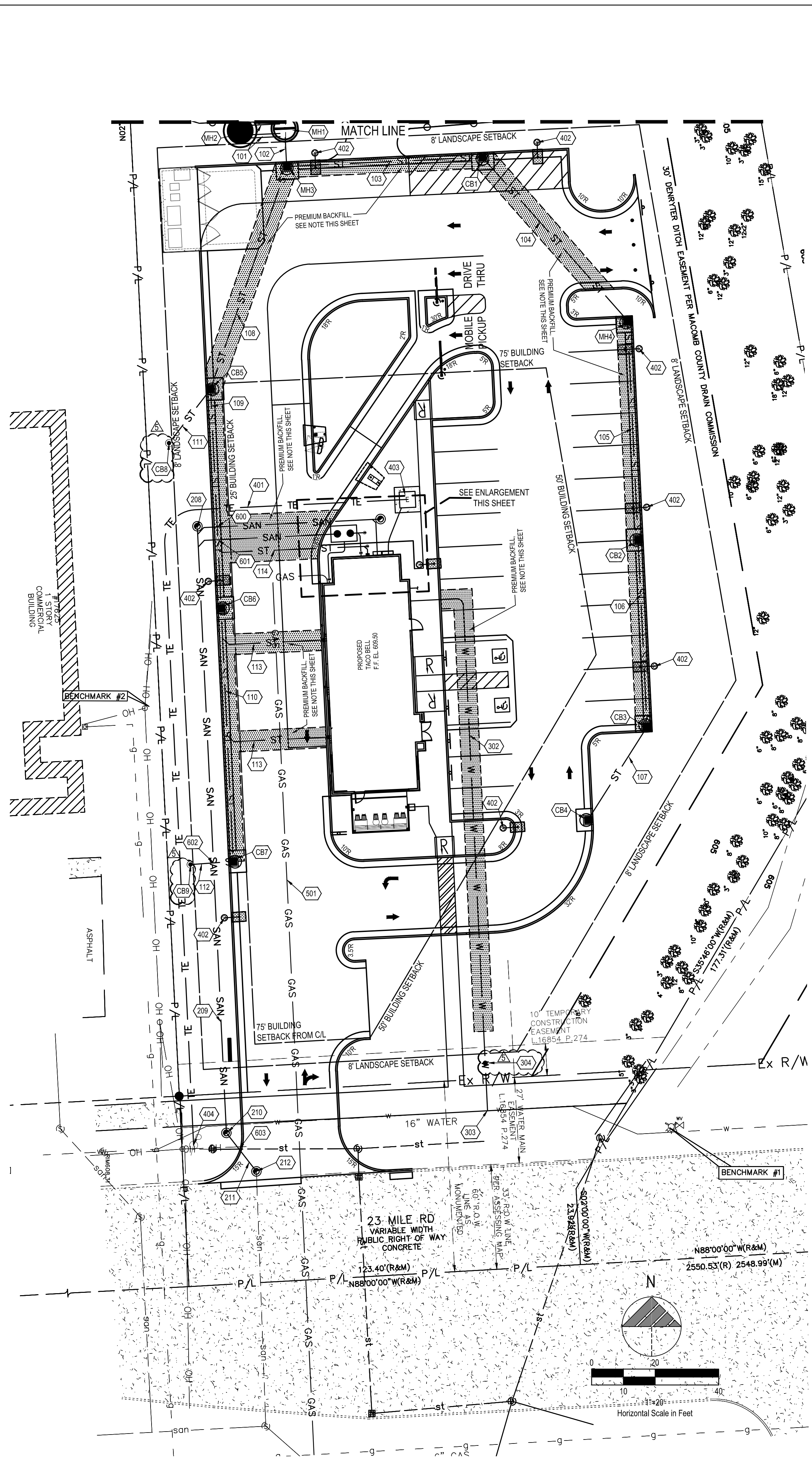


ENDEAVOR 2.0

GRADING  
PLAN

**C-121**

PLOT DATE:



**LEGEND**  
(SEE SHEET C-001 FOR GENERAL LEGEND)

ST	PROPOSED STORM SEWER (12" AND SMALLER)
SAN	PROPOSED SANITARY SEWER
W	PROPOSED WATER SERVICE
GAS	PROPOSED GAS SERVICE
E	PROPOSED UNDERGROUND ELECTRIC SERVICE
T&C	PROPOSED UNDERGROUND TELEPHONE & CABLE SERVICE
A	APPURTENANCES
#	UTILITY CONSTRUCTION KEYNOTE

STRUCT. ID	STRUCTURE DETAILS
ES 1	PROPOSED STORM SEWER END SECTION (SEE SHEET C-505) INV. 12" (S) = 604.10
ES 2	PROPOSED STORM SEWER END SECTION (SEE SHEET C-505) INV. 12" (S) = 604.10
ES 3	PROPOSED STORM SEWER END SECTION (SEE SHEET C-505) INV. 12" (E) = 603.75
MH 1	PROPOSED STORM SEWER MANHOLE 84" DIA. WITH FLAT TOP (SEE SHEET C-504 & C-505) RIM=607.45 (E) IJW # 1040 FRAME WITH TYPE 'A' SOLID COVER INV. 12" (N) = 604.32, INV. 12" (S) = 604.42 INV. 12" (W) (TO WQ UNIT) = 604.32 INV. 12" (W) (FROM WQ UNIT) = 604.32
MH 2	PROPOSED WATER QUALITY TREATMENT UNIT (SEE SHEET C-510) STANDARD STORM MANHOLE 96" DIA. (SEE SHEET C-505) RIM=607.45 (E) IJW # 1040 FRAME WITH TYPE 'A' SOLID COVER INV. 12" (E) (TO MH1) = 604.32 INV. 12" (W) (FROM MH1) = 604.32
MH 3	PROPOSED STORM SEWER MANHOLE 48" DIA. WITH FLAT TOP AND 2.0' SUMP (SEE SHEET C-505) RIM=608.01 INV. 12" (N, SW) = 604.41 INV. 12" (E) = 604.51
CB 1	PROPOSED STORM SEWER CATCH BASIN (SEE SHEET C-505) RIM=607.71 INV. 12" (W, SE) = 604.92
MH 4	PROPOSED STORM SEWER MANHOLE 48" DIA. WITH FLAT TOP AND 2.0' SUMP (SEE SHEET C-505) RIM=608.02 INV. 12" (N, W, S) = 605.27
CB 2	PROPOSED STORM SEWER CATCH BASIN (SEE SHEET C-505) RIM=608.03 INV. 12" (N, S) = 605.52
CB 3	PROPOSED STORM SEWER CATCH BASIN (SEE SHEET C-505) RIM=608.12 INV. 12" (N, SW) = 605.92
CB 4	PROPOSED STORM SEWER CATCH BASIN (SEE SHEET C-505) RIM=608.31 INV. 12" (NE) = 606.09
CB 5	PROPOSED STORM SEWER CATCH BASIN (SEE SHEET C-505) RIM=608.12 INV. 12" (NE, S) = 604.88 INV. 6" (SW) = 604.98
CB 6	PROPOSED STORM SEWER CATCH BASIN (SEE SHEET C-505) RIM=608.30 INV. 12" (N, S) = 606.22
CB 7	PROPOSED STORM SEWER CATCH BASIN (SEE SHEET C-505) RIM=608.00 INV. 12" (N) = 605.63 INV. 6" (W) = 605.73
CB 8	PROPOSED 36" STORM SEWER CATCH BASIN (SEE SHEET C-504) RIM=606.50 INV. 6" (NE) = 605.09
CB 9	PROPOSED 36" STORM SEWER CATCH BASIN (SEE SHEET C-504) RIM=607.00 INV. 6" (E) = 605.86
OS 1	PROPOSED OUTLET STRUCTURE STORM SEWER MANHOLE 60" DIA. WITH FLAT TOP (SEE SHEET C-503 & C-505) RIM=606.00 INV. 12" (W) = 604.00 INV. 12" (E) = 603.75
GI 1	PROPOSED 1,000 GALLON EXTERIOR GREASE INTERCEPTOR (SEE SHEET C-502) RIM=609.50 INV. 6" PVC (E) = 604.25 INV. 6" PVC (W) = 604.00

\* FINGER DRAIN INVERT SHALL MATCH THE BOTTOM OF THE PAVEMENT AGGREGATE BASE

**PLAN KEYNOTES**

- STORM**
- PROPOSED 22 L.F. OF 12" HDPE STORM SEWER @ 1.00%
  - PROPOSED 9 L.F. OF 12" HDPE STORM SEWER @ 1.00%
  - PROPOSED 61 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 69 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 69 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 59 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 34 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 74 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 69 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 80 L.F. OF 12" RCP CLASS V STORM SEWER @ 0.50%
  - PROPOSED 21 L.F. OF 6" PVC SCHEDULE 40 STORM SEWER @ 1.00%
  - PROPOSED 13 L.F. OF 6" PVC SCHEDULE 40 STORM SEWER @ 1.00%
  - PROPOSED 32 L.F. OF 6" PVC SCHEDULE 40 STORM SEWER @ 1.00%
  - PROPOSED 49 L.F. OF 6" PVC SCHEDULE 40 STORM SEWER @ 1.00%
  - PROPOSED 6 L.F. OF 12" HDPE STORM SEWER @ 0.00%
  - PROPOSED 50 L.F. OF 12" RCP CLASS V STORM SEWER @ 1.00%
  - PROPOSED STORM CLEANOUT AND WYE CONNECTION. SEE SHEET C-502, RIM=609.45, INV. 605.52
  - PROPOSED STORM SEWER OUTLET END SECTION PER MACOMB COUNTY STANDARDS AND SPECIFICATIONS. SEE SHEET C-505.

- SANITARY**
- PROPOSED SANITARY CONNECTION TO GREASE INTERCEPTOR INV. = 604.50, COORDINATE WITH PLUMBING PLANS AND MACOMB TOWNSHIP BUILDING DEPARTMENT
  - PROPOSED SANITARY CONNECTION INV. = 604.50, COORDINATE WITH PLUMBING PLANS.
  - PROPOSED 8 L.F. OF 6" PVC SCHEDULE 40 SANITARY SEWER @ 2.50%
  - PROPOSED SANITARY CLEANOUT AND WYE CONNECTION SEE SHEET C-502, RIM=609.50, INV. = 604.30.
  - PROPOSED 12 L.F. OF 6" PVC SCHEDULE 40 SANITARY SEWER @ 2.50%
  - PROPOSED SANITARY INSPECTION MANHOLE. SEE SHEET C-508, RIM=609.50, INV. = 604.20
  - PROPOSED 56 L.F. OF 6" PVC SCHEDULE 40 SANITARY SEWER @ 2.50%
  - PROPOSED 44 L.F. OF 6" PVC SCHEDULE 40 SANITARY SEWER @ 3.00%
  - PROPOSED SANITARY INSPECTION MANHOLE. SEE SHEET C-508, RIM=607.60, INV. = 602.80
  - PROPOSED 18 L.F. OF 6" PVC SCHEDULE 40 SANITARY SEWER @ 2.00%
  - PROPOSED SANITARY INSPECTION MANHOLE. SEE SHEET C-508, RIM=609.50, INV. = 606.98
  - PROPOSED 16 L.F. OF 6" PVC SCHEDULE 40 SANITARY SEWER @ 2.00%
  - PROPOSED SANITARY INSPECTION MANHOLE. SEE SHEET C-508 AT EXISTING SEWER LATERAL INV. 598.65. CONTRACTOR TO VERIFY EXISTING SANITARY SEWER LATERAL, LOCATION, SIZE AND INVERT PRIOR TO START OF ANY SANITARY SEWER WORK. ALL WORK SHALL BE COORDINATED WITH MACOMB TOWNSHIP DEPARTMENT OF PUBLIC WORKS.
  - PROPOSED 3" VENT PVC SCHEDULE 40 FROM GREASE INTERCEPTOR
  - PROPOSED SANITARY CLEANOUT AND WYE CONNECTION SEE SHEET C-502, RIM=609.50, INV. = 604.45.
  - PROPOSED SANITARY CLEANOUT AND WYE CONNECTION SEE SHEET C-502, RIM=609.50, INV. = 604.45.

- WATER**
- PROPOSED WATER CONNECTION. COORDINATE WITH PLUMBING PLANS.
  - PROPOSED 1" IRRIGATION TAP. COORDINATE WITH PLUMBING PLANS
  - PROPOSED 177 L.F. 1-1/2" HDPE SDR 9 WITH 3 TRACER WIRES WATER SERVICE LINE.
  - PROPOSED WATER SERVICE TAP PER MACOMB TOWNSHIP WATER MAIN DETAILS.
  - PROPOSED CURB STOP PER MACOMB TOWNSHIP WATER MAIN DETAILS.
- NOTE:**  
WATER METER AND BACKFLOW PREVENTOR INSIDE BUILDING PER MACOMB TOWNSHIP WATER MAIN DETAILS. BACKFLOW PREVENTOR SHALL BE LOCATED AFTER THE METER. COORDINATE ALL WORK WITH MACOMB TOWNSHIP DEPARTMENT OF PUBLIC WORKS.

- ELECTRIC AND COMMUNICATIONS**
- PROPOSED ELECTRIC METER PER ELECTRIC COMPANY SPECIFICATIONS. SEE BUILDING DRAWINGS FOR EXACT LOCATION. ELECTRIC SERVICE LINE TO BE COORDINATED WITH THE ELECTRIC COMPANY.
  - PROPOSED ELECTRIC AND TELECOMMUNICATIONS SERVICE LINE.
  - PROPOSED LIGHT POLE. SEE ELECTRICAL DRAWINGS FOR SPECIFICATIONS.
  - PROPOSED ELECTRICAL TRANSFORMER PER ELECTRICAL COMPANY SPECIFICATIONS. G.C. TO VERIFY EXACT LOCATION AND SIZE WITH UTILITY ENGINEER.
  - PROPOSED ELECTRIC AND TELECOMMUNICATIONS SERVICE CONNECTION TO BE COORDINATED WITH THE UTILITY COMPANIES.

- GAS**
- PROPOSED GAS METER PER GAS COMPANY SPECIFICATIONS. SEE BUILDING DRAWINGS FOR EXACT LOCATION. GAS SERVICE LINE TO BE COORDINATED WITH THE GAS COMPANY.
  - PROPOSED 295 L.F. GAS SERVICE LINE.
  - PROPOSED GAS SERVICE CONNECTION. COORDINATED ALL WORK WITH THE GAS COMPANY

- UTILITY CROSSINGS**
- GENERAL UTILITY CROSSING NOTES:
- CONTRACTOR SHALL COORDINATE ALL CROSSINGS/RELOCATIONS WITH THE RESPECTIVE UTILITY COMPANIES.
  - EXISTING AND PROPOSED PRESSURIZED (WATER & GAS) AND SECONDARY (ELECTRIC & COMMUNICATIONS) UTILITIES SHALL DEFLECT TO MAINTAIN 18" CLEAR AT SANITARY OR STORM SEWER CROSSINGS WHEN CONFLICTS OCCUR.
  - WHEN A PROPOSED PRESSURIZED SECONDARY UTILITY IS IN CROSSING CONFLICT WITH AN EXISTING PRESSURIZED SECONDARY UTILITY, THE PROPOSED UTILITY SHALL DEFLECT TO OBTAIN MINIMUM CLEARANCE.
  - CONTRACTOR SHALL FIELD LOCATE EXISTING PRESSURIZED SECONDARY UTILITIES AT PROPOSED CROSSINGS.
  - FOR CLEARANCE BETWEEN PIPES OF LESS THAN 18", THE CONTRACTOR SHALL PROVIDE CONCRETE ENCASEMENT PER SHEET C-503.
- 

**NOTE:** BACKFILL SHALL BE PER MDOT CLASS II SAND BACKFILL COMPACTED TO 95% MAX. DENSITY IN 6 INCH LIFTS. SEE DETAIL SHEET C-505, C-508 & C-509.

- BENCHMARKS AND BASIS OF BEARING:**  
NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.
- BENCHMARK #1**  
ARROW ON FIRE HYDRANT, EAST OF EAST PROPERTY LINE, NORTH SIDE OF 23 MILE RD. ELEVATION = 611.36' (NAVD 88)
- BENCHMARK #2**  
MAG NAIL IN NORTH MOST UTILITY POLE BY WEST PROPERTY LINE. ELEVATION = 608.83' (NAVD 88)



DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END, MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

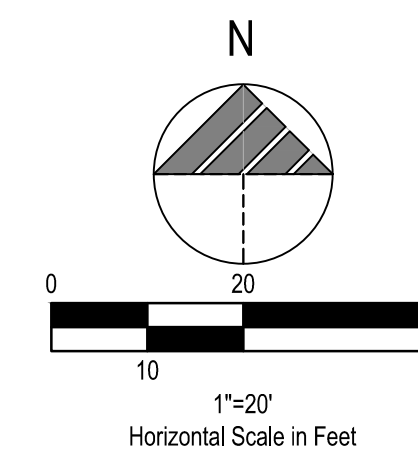
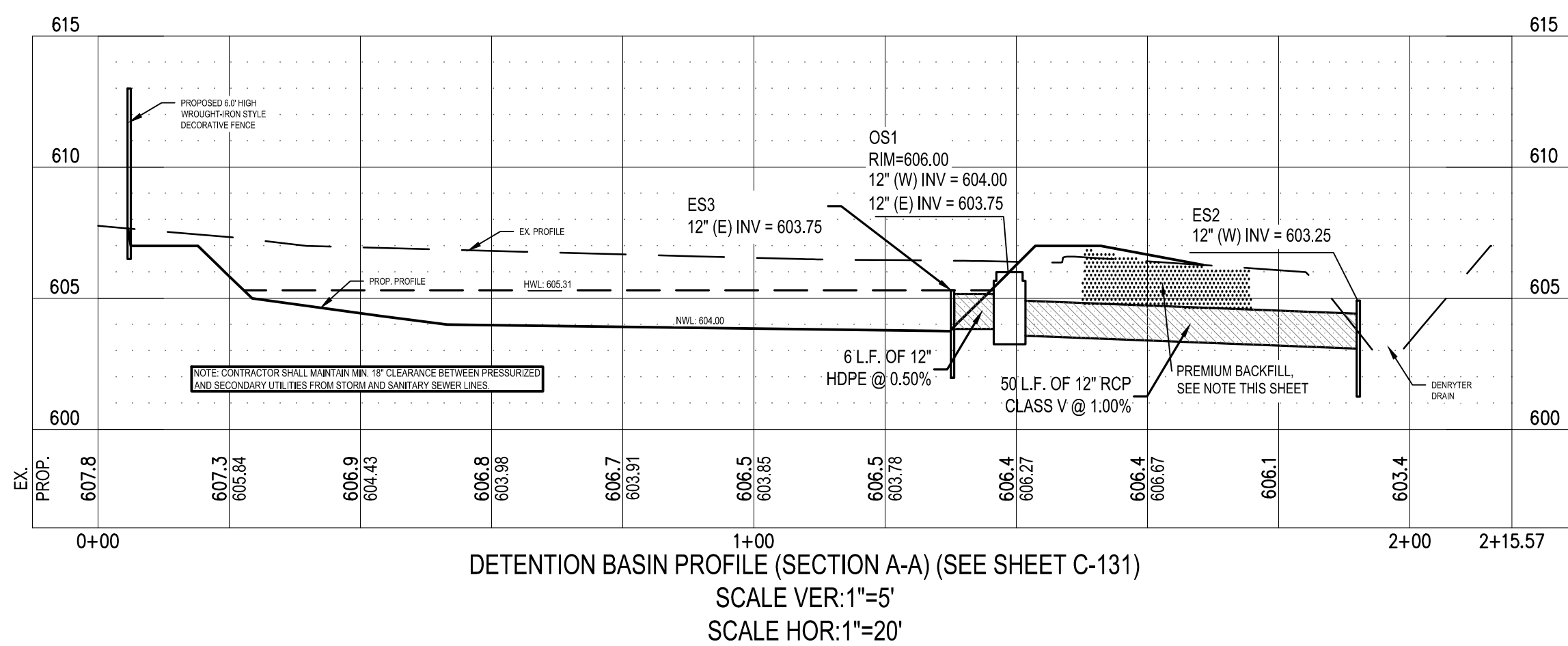
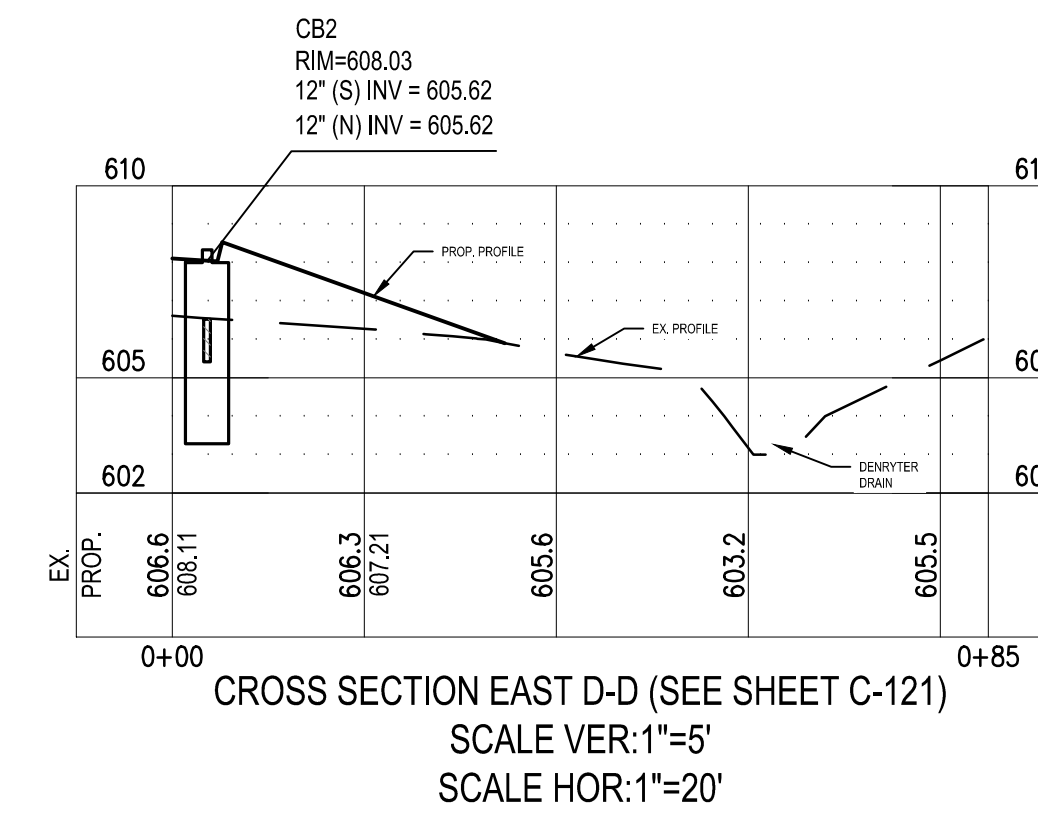
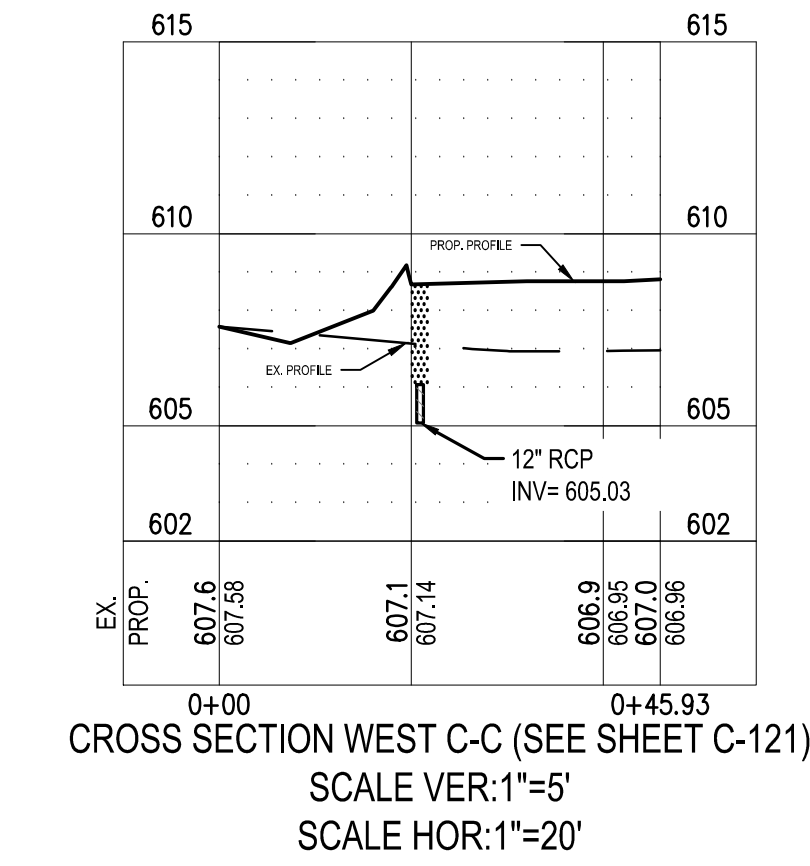
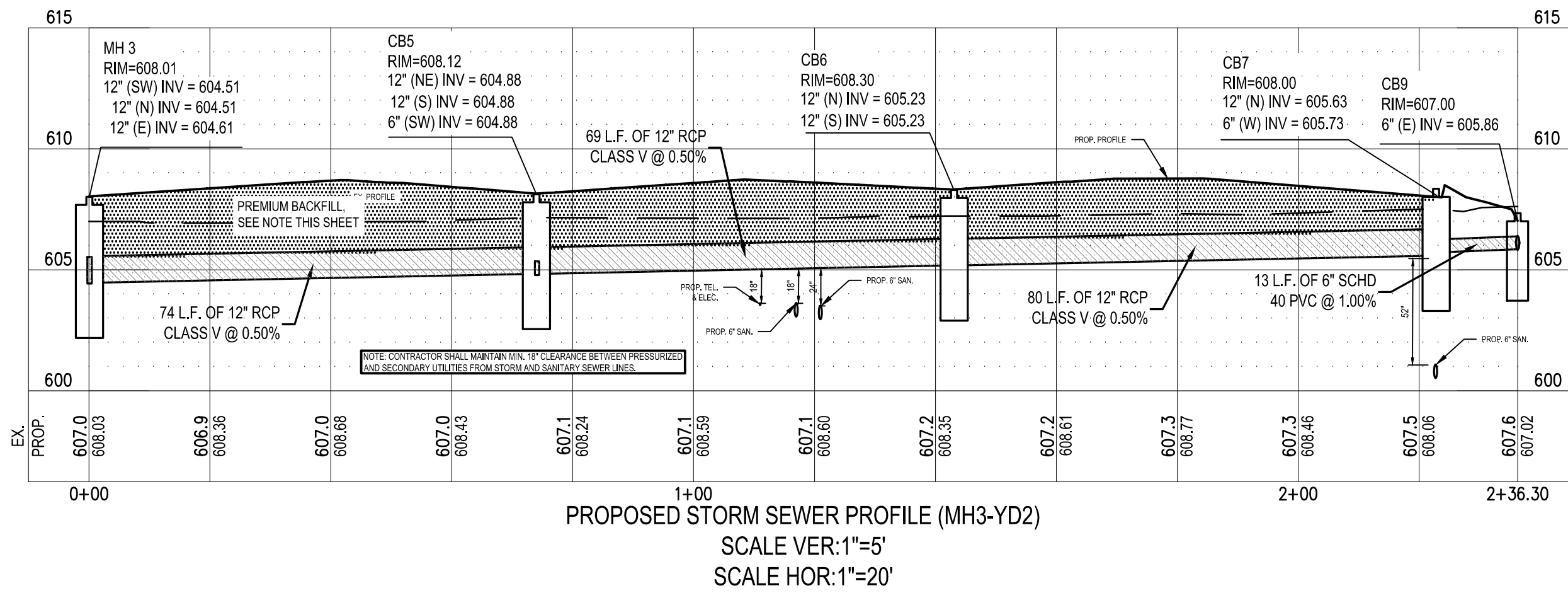
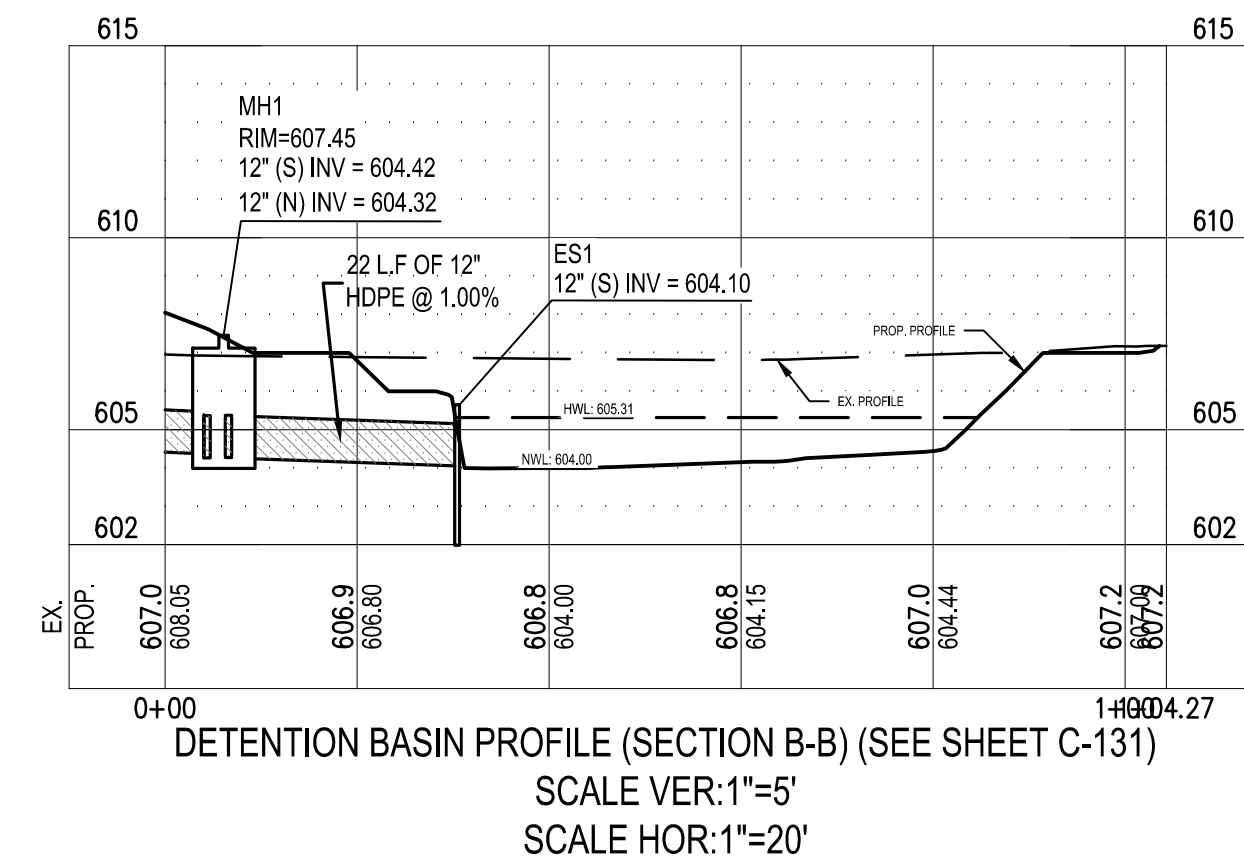
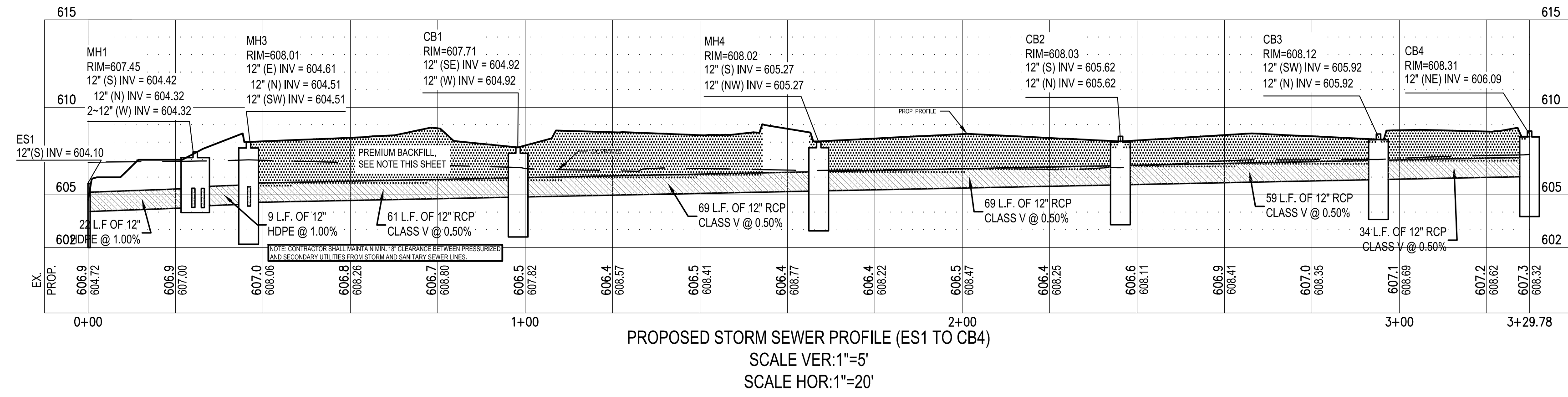
**TACO BELL**

17669 23 Mile Road  
Macomb, MI 48042

ENDEAVOR 2.0

UTILITY PLAN  
**C-131**

PLOT DATE:



NOTE: BACKFILL SHALL BE PER MDT CLASS II SAND BACKFILL COMPACTED TO 95% MAX. DENSITY IN 6 INCH LIFTS. SEE DETAIL SHEET C-505, C-508 & C-509.

**BENCHMARKS AND BASIS OF BEARING:**  
NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.  
**BENCHMARK #1**  
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CONTRACT DATE: 11.15.21  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

TACO BELL

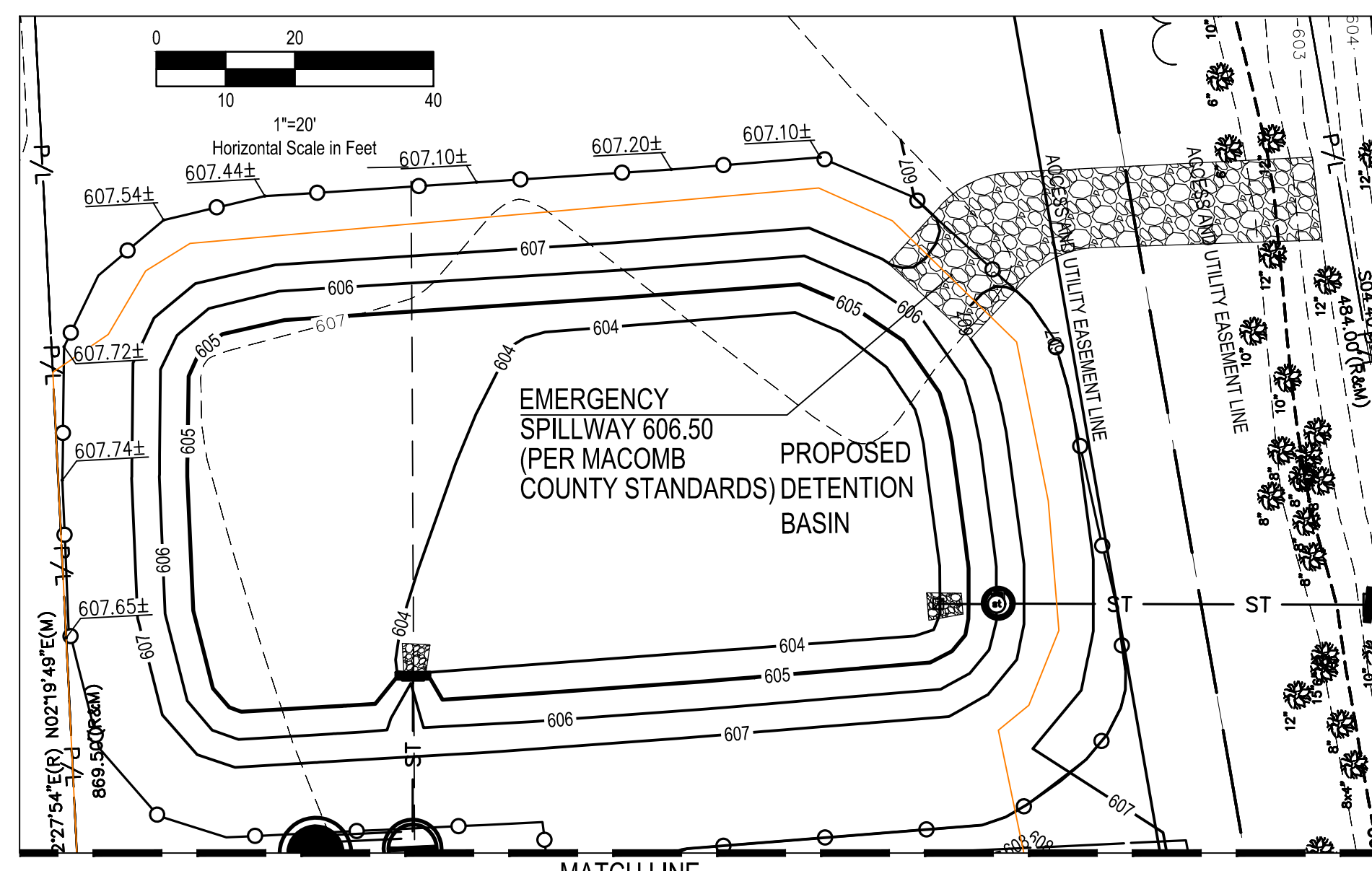
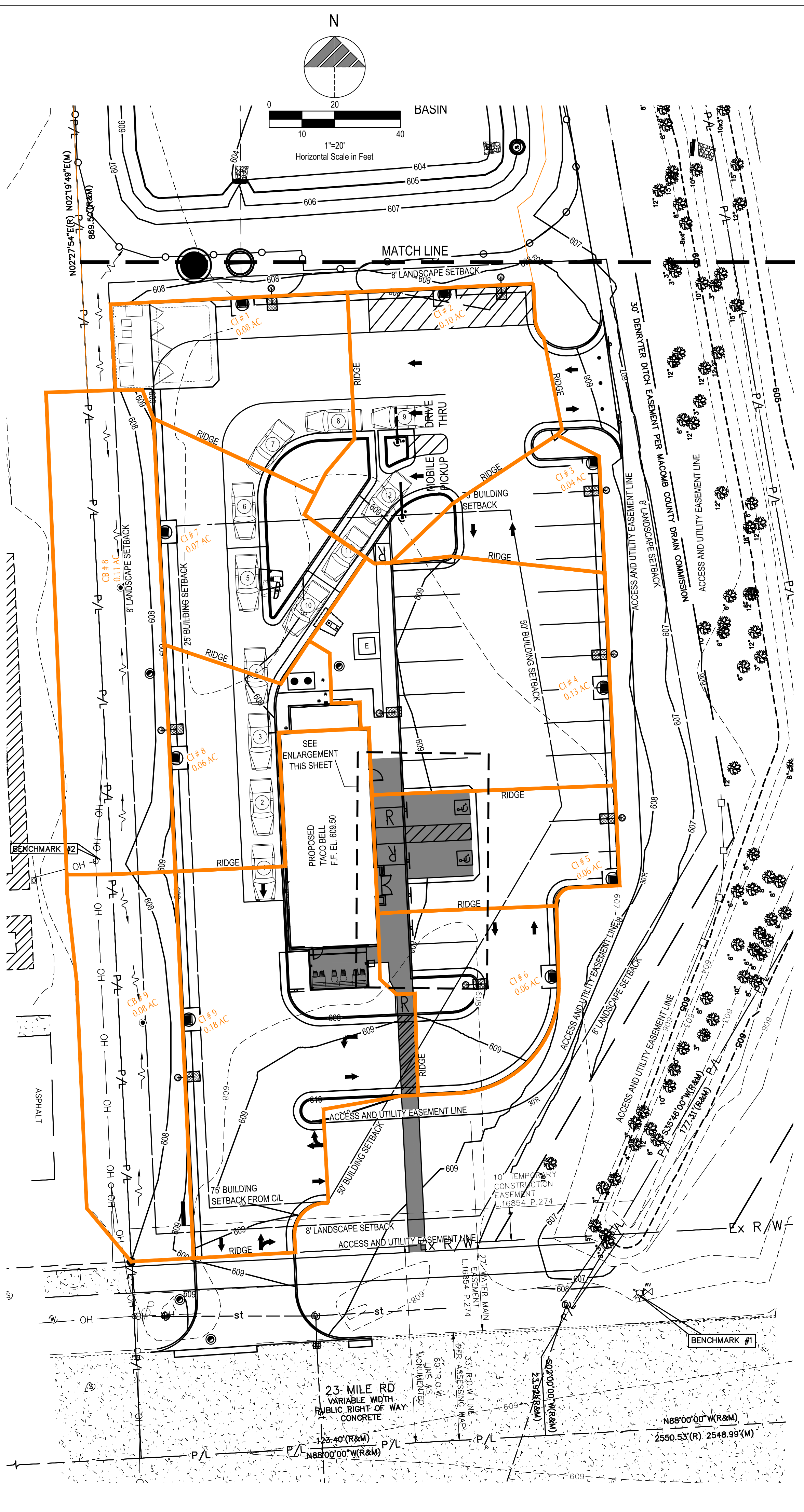
17669 23 Mile Road  
Macomb, MI 48042



ENDEAVOR 2.0  
STORM SEWER  
PROFILES

C-132

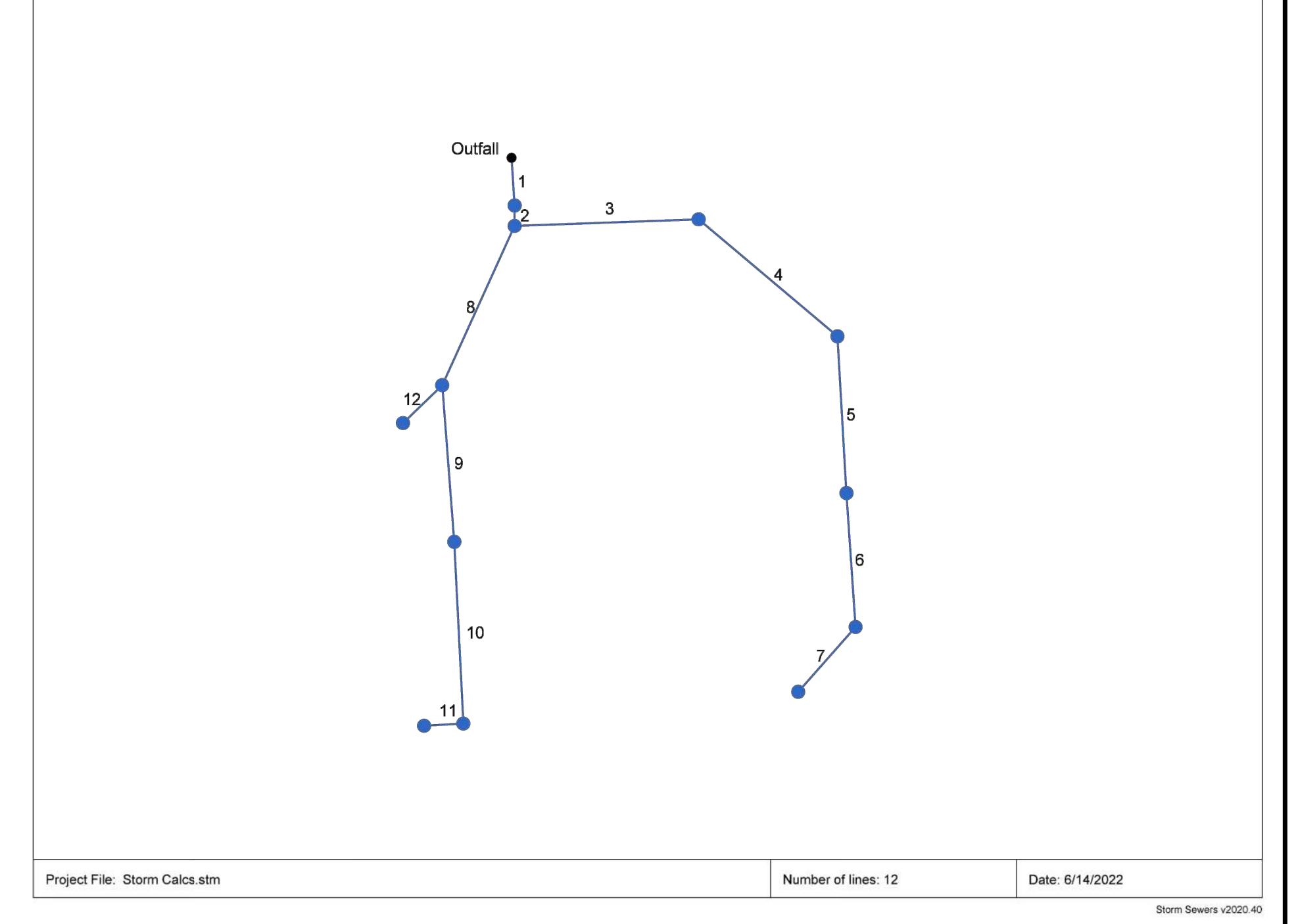
PLOT DATE:



**LEGEND**  
(SEE SHEET C-001 FOR GENERAL LEGEND)

- 000 — PROPOSED CONTOUR
- - - 000 - - - EXISTING CONTOUR
- DRAINAGE AREAS TO CATCH BASINS
- ADA LIMITS OF ADA ROUTING

**Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan**



**Storm Sewer Tabulation**

Station	Line	Len	Dmg Area	Rnoff	Area x C	Tc	Rain	Total	Cap	Vel	Pipe	Slope	Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID		
													Dn	Up	Dn	Up	Dn	Up			
12	8	21.000	0.11	0.11	0.10	0.10	10.0	10.0	5.0	0.48	6	1.00	604.78	604.89	605.57	605.71	608.12	607.00			
11	10	13.000	0.08	0.08	0.07	0.07	10.0	10.0	5.0	0.36	6	1.00	605.53	605.96	605.96	605.96	608.00	607.00			
10	9	80.000	0.18	0.26	0.90	0.16	0.23	10.0	10.1	4.9	1.15	2.73	2.82	12	0.50	605.13	605.53	605.74	605.98	608.30	608.00
9	8	68.000	0.06	0.32	0.80	0.05	0.29	10.0	11.0	4.7	1.35	2.75	2.61	12	0.51	604.78	605.13	605.57	605.96	608.12	608.30
8	2	74.000	0.07	0.50	0.90	0.06	0.45	10.0	11.7	4.6	2.05	2.73	3.47	12	0.50	604.41	604.78	605.20	605.42	608.01	608.12
7	6	34.000	0.06	0.06	0.90	0.05	0.05	10.0	10.0	5.0	0.27	2.73	1.80	12	0.50	605.72	605.89	606.01	606.10	608.12	608.31
6	5	69.000	0.06	0.12	0.90	0.05	0.11	10.0	11.7	4.6	0.48	2.75	2.11	12	0.51	605.42	605.72	605.83	606.01	608.03	608.12
5	4	69.000	0.13	0.25	0.90	0.12	0.23	10.0	13.1	4.3	0.96	2.75	3.04	12	0.51	605.07	605.42	605.51	605.83	608.02	608.03
4	3	69.000	0.04	0.29	0.90	0.04	0.26	10.0	14.0	4.1	1.08	2.75	2.50	12	0.51	604.72	605.07	605.46	605.51	607.61	608.02
3	2	51.000	0.10	0.39	0.90	0.35	10.0	14.7	4.0	1.41	2.75	2.63	12	0.51	604.41	604.72	605.20	605.27	608.01	607.61	
2	1	9.000	0.08	0.97	0.90	0.07	0.87	10.0	15.2	3.9	3.43	3.86	5.14	12	1.00	604.32	604.41	605.11	605.20	607.45	608.01
1	End	21.000	0.01	0.98	0.90	0.01	0.88	10.0	15.2	3.9	3.46	3.95	5.16	12	1.05	604.10	604.32	604.90	605.11	606.00	607.45

Project File: Storm Calcs.stm  
Number of lines: 12  
Run Date: 6/14/2022

NOTES: Intensity = 27.44 / (inlet time + 2.60) ^ 0.68; Return period = Yrs. 10 ; c = cir e = ellip b = box

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JOB NO.: 2021088.48

**TACO BELL**  
17669 23 Mile Road  
Macomb, MI 48042



ENDEAVOR 2.0  
STORM SEWER DA  
MAP AND  
CALCULATIONS

**C-133**

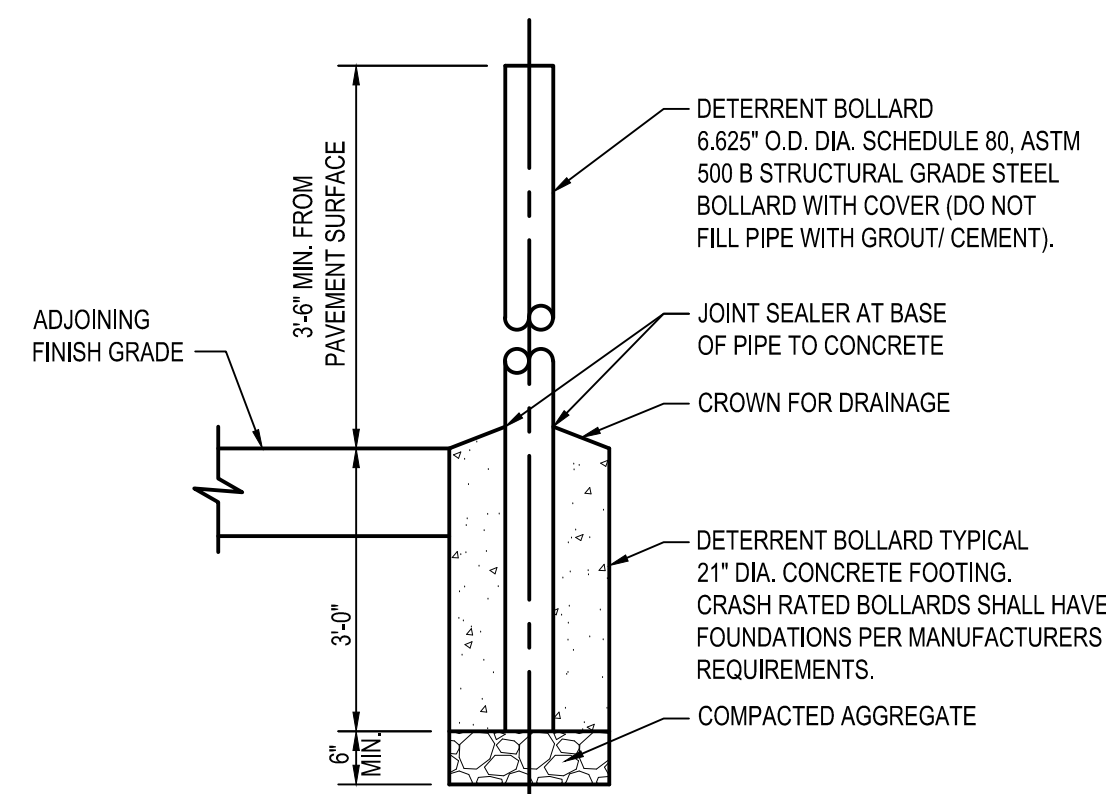
PLOT DATE:



**BENCHMARKS AND BASIS OF BEARING:**  
NORTH 88°00'00" WEST, BEING THE SOUTH LINE OF SECTION 17, AS DESCRIBED.

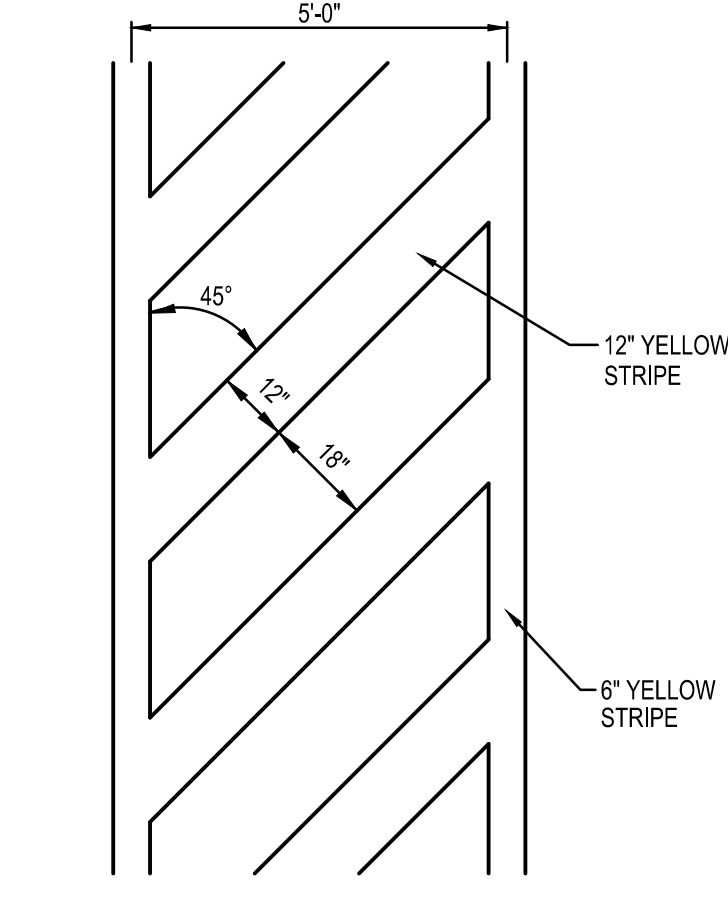
**BENCHMARK #1**  
ARROW ON FIRE HYDRANT, EAST OF EAST PROPERTY LINE, NORTH SIDE OF 23 MILE RD.  
ELEVATION = 611.36' (NAVD 88)

**BENCHMARK #2**  
MAG NAIL IN NORTH MOST UTILITY POLE BY WEST PROPERTY LINE.  
ELEVATION = 608.83' (NAVD 88)

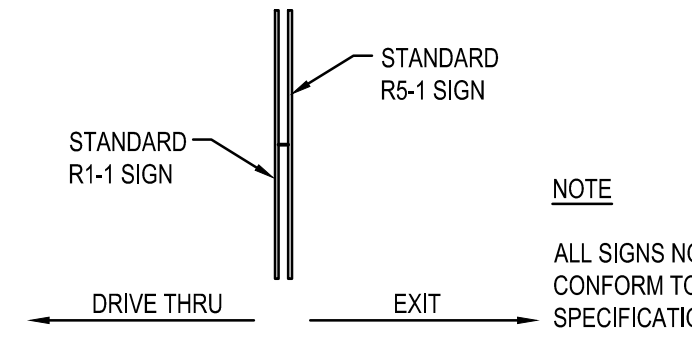
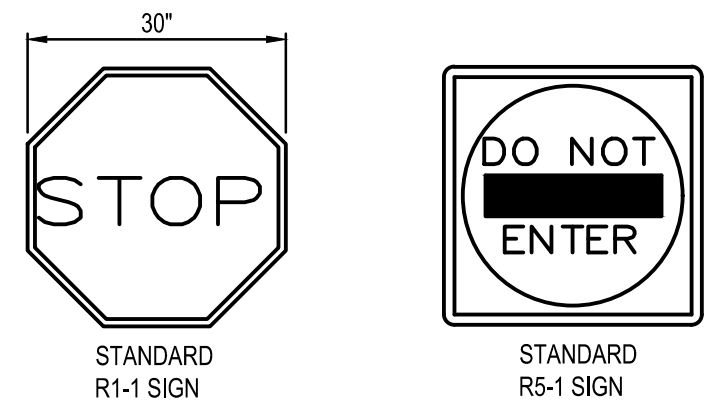


**DETERRENT BOLLARD NOTES:**  
 1. CONTRACTOR SHALL UTILIZE GALVANIZED COATED OR FULLY PAINT STEEL PIPE WITH AN EXTERIOR RUST INHIBITIVE PAINT PRIOR TO INSTALLATION AND TOUCH UP AFTER INSTALLATION SUCH AS SHERWIN-WILLIAMS MACROPOXY 646 FAST CURE (BS8W610), IN ACCORDANCE WITH MANUFACTURERS PREPARATION REQUIREMENTS. PROVIDE A YELLOW (BLUE FOR ADA) BOLLARD COVER SUCH AS A STREET SMART SOLUTIONS POST GUARD, DOME-TOP COVER BY US-POSTMAN.COM OR APPROVED EQUAL.

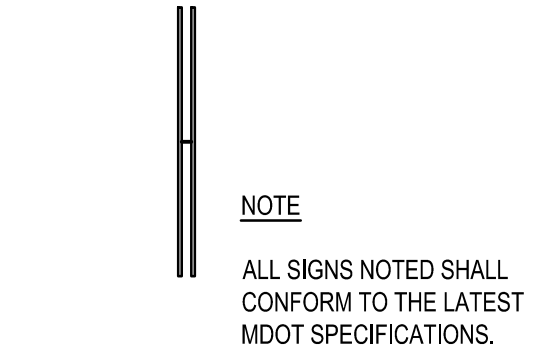
**CRASH-RATED BOLLARD NOTES:**  
 2. WHERE BOLLARDS ARE SEPARATING PEDESTRIANS / STOREFRONTS AND VEHICLES THE CONTRACTOR SHALL INSTALL A CRASH RATED BOLLARD AND FOOTING PER ASTM F3016/3016M. TYPICAL CLEAR SPACING OF 60" WITH AN ANTICIPATED S20 RATING FOR BIDDING PURPOSES - FINAL SPACING AND RATING SHALL BE IN ACCORDANCE WITH ASTM AND THE MANUFACTURERS REQUIREMENTS FOR PROPOSED LOCATIONS AND POSSIBLE VEHICLE APPROACH SPEED. THE NOTED ASTM CRASH RATED PRODUCT SUCH AS, BUT NOT LIMITED TO, CRASHCORE BOLLARD BY MCCLUE.COM OR APPROVED CRASH RATED EQUIVALENT SHALL BE UTILIZED IN ACCORDANCE WITH MANUFACTURE SPECIFICATIONS. INSTALLER / CONTRACTOR SHALL BE OR BECOME CERTIFIED INSTALLERS, CONTACT MANUFACTURER(S) FOR DETAILS.



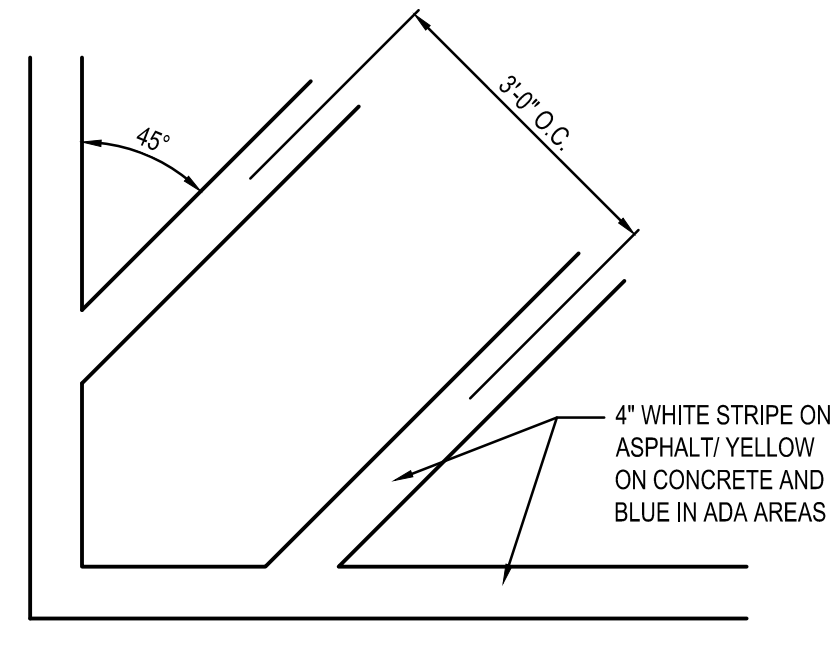
**C2 CROSSWALK STRIPING**  
N.T.S.



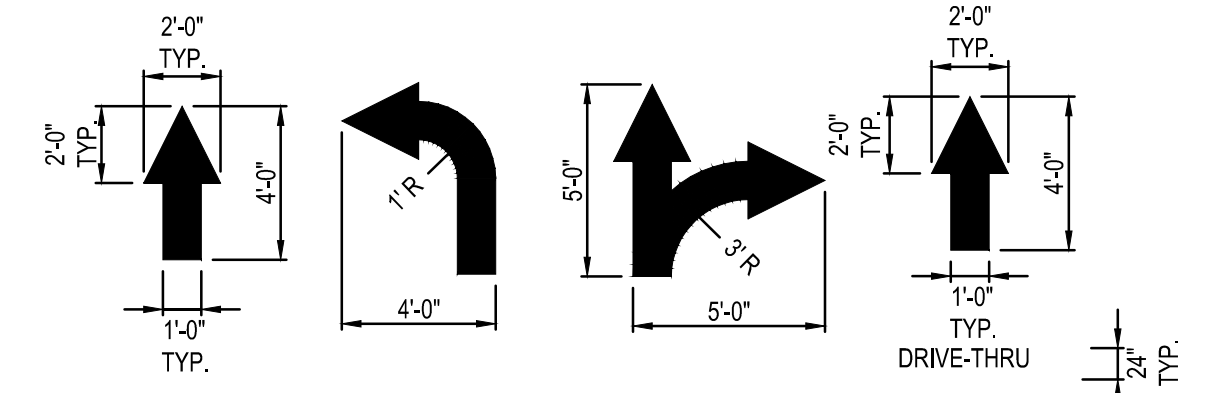
**C3 DO NOT ENTER & STOP SIGN**  
N.T.S.



**C4 NO EXIT**  
N.T.S.

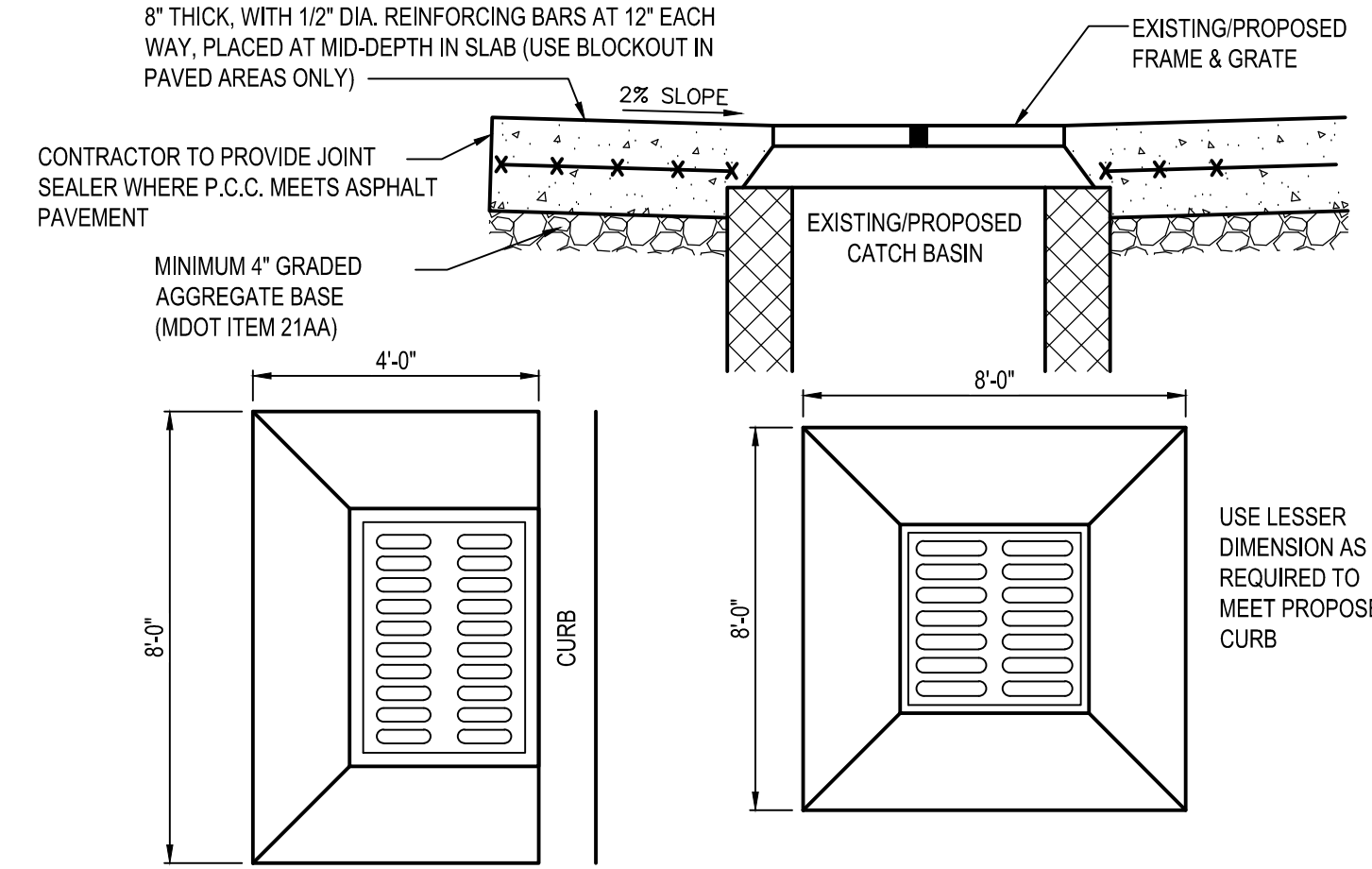


**C5 TRANSVERSE STRIPING**  
N.T.S.

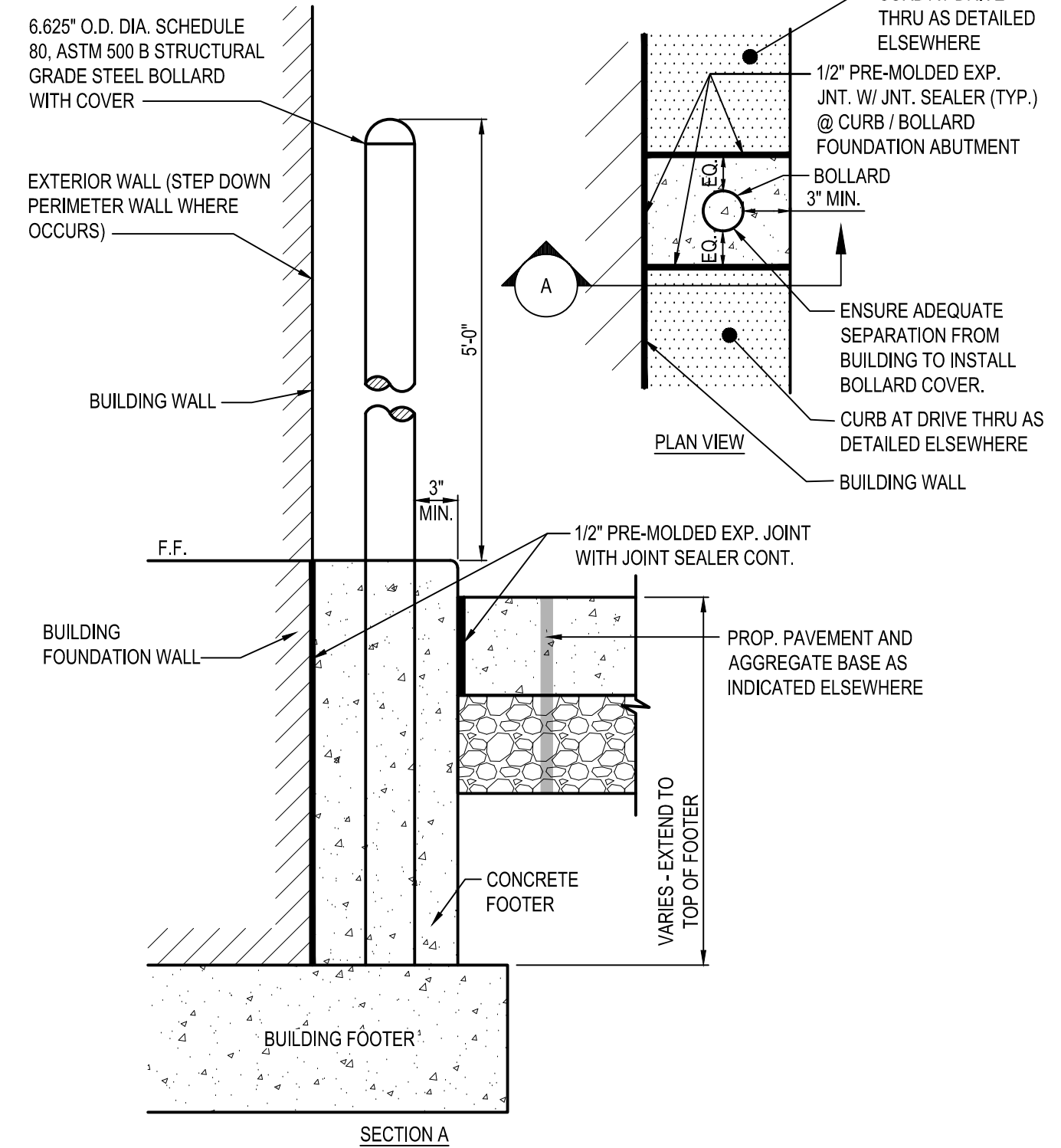


**NOTES:**  
 ALL PAVEMENT MARKINGS TO BE WHITE PAVEMENT PAINT, UNLESS STATED OTHERWISE. ALL PAVEMENT MARKINGS WITHIN ADA AREAS SHALL BE PAINTED BLUE EXCEPT FOR COLORS DEFINED ON THE ADA PAVEMENT SYMBOL.  
 MARKING (STRIPING) PAINT FOR PARKING SPACES, TRAFFIC ARROWS, ADA PARKING AND SYMBOLS, ETC., PER LOCAL REQUIREMENTS AND AS FOLLOWS:  
 PAINT SHALL BE WATER BASE FAST DRYING 100% ACRYLIC TYPE: WATER BASE TO MEET FEDERAL SPECIFICATION TTP-01952B, FOR COLD WEATHER APPLICATION PAINT PRODUCT SHALL BE IN ACCORDANCE WITH ASTM-D2369, D1394, D3723, D1475, D562 AND D711  
 PROVIDE A NON-SLIP AGGREGATE ADDITIVE TO MARKING PAINT USED AT ADA ACCESS RAMP.  
 APPLY 2 COATS WITH STRAIGHT EDGES, YELLOW ON CONCRETE/WHITE ON ASPHALT EXCEPT WHEN MATCHING ADJACENT OR EXISTING COLOR WHEN THE PAVING IS AN EXPANSION OR SEGMENT OF A LARGER LOT. CONTRACTOR SHALL APPLY THE SECOND COAT NO SOONER THAN 30 DAYS OF APPLYING THE FIRST COAT.

**C6 PAVEMENT MARKINGS & NOTES**  
N.T.S.

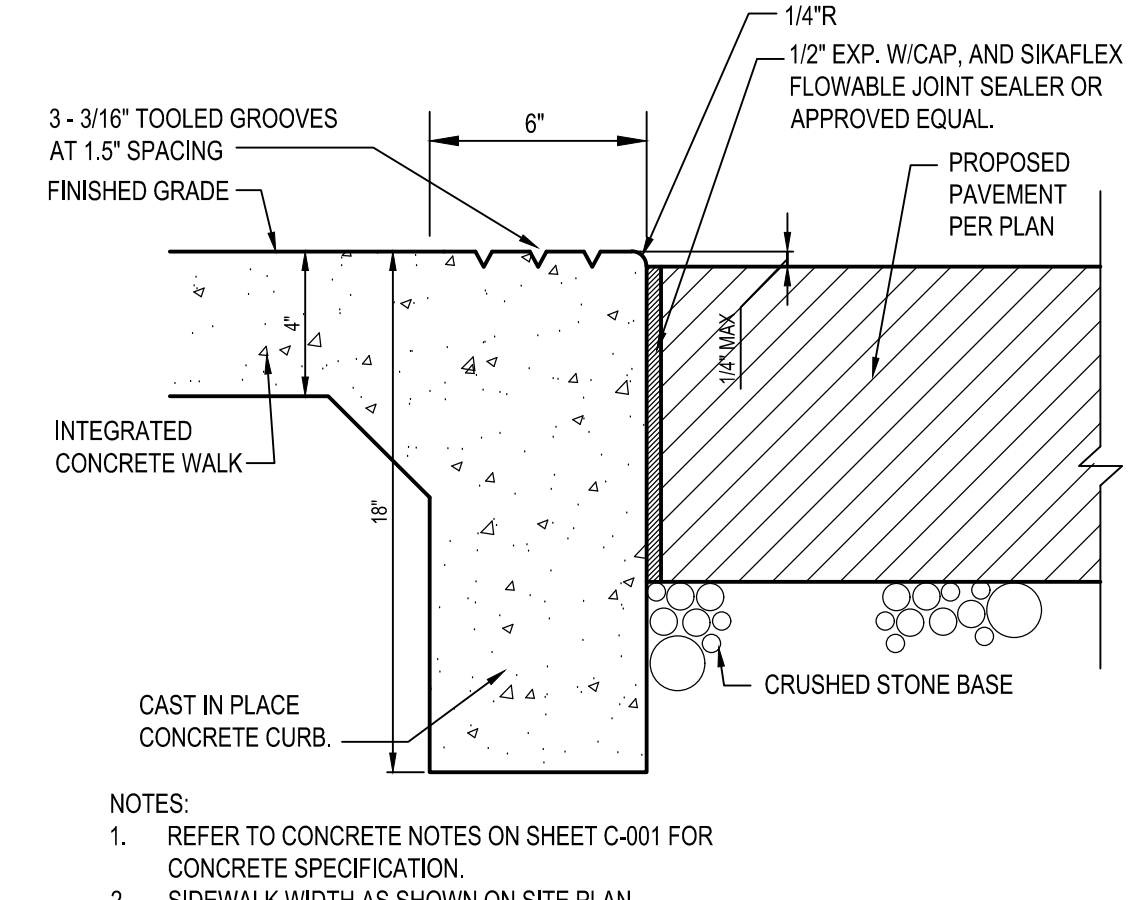


**A1 CONCRETE COLLAR**  
N.T.S.

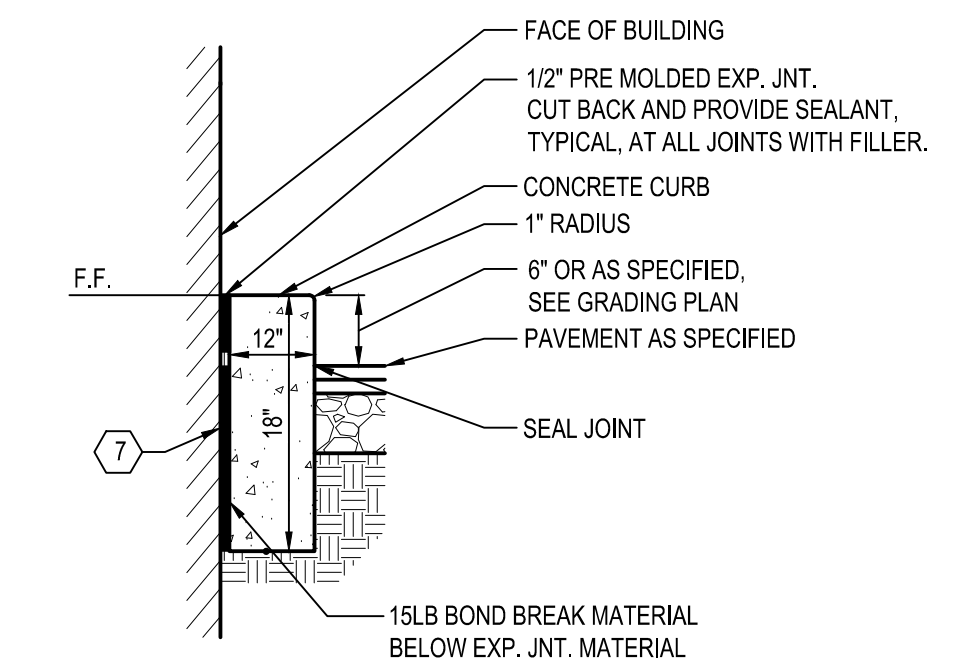


**NOTE:**  
 1. CONTRACTOR SHALL UTILIZE GALVANIZED COATED OR FULLY PAINT STEEL PIPE WITH AN EXTERIOR RUST INHIBITIVE PAINT PRIOR TO INSTALLATION AND TOUCH UP AFTER INSTALLATION SUCH AS SHERWIN-WILLIAMS MACROPOXY 646 FAST CURE (BS8W610), IN ACCORDANCE WITH MANUFACTURERS PREPARATION REQUIREMENTS. PROVIDE A YELLOW (BLUE FOR ADA) BOLLARD COVER SUCH AS A STREET SMART SOLUTIONS POST GUARD, DOME-TOP COVER BY US-POSTMAN.COM OR APPROVED EQUAL.

**B1 DETERRENT BOLLARD IN CURB**  
N.T.S.



**B2 FLUSH CURB**  
N.T.S.



**B3 CONCRETE CURB AT DRIVE THRU**  
N.T.S.

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
 BUILDING TYPE: END. MED20  
 PLAN VERSION: MARCH 2021  
 BRAND DESIGNER: DICKSON  
 SITE NUMBER: 315390  
 STORE NUMBER: 457226  
 PA/PM: SM  
 DRAWN BY.: EA  
 JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
Macomb, MI 48042



ENDEAVOR 2.0

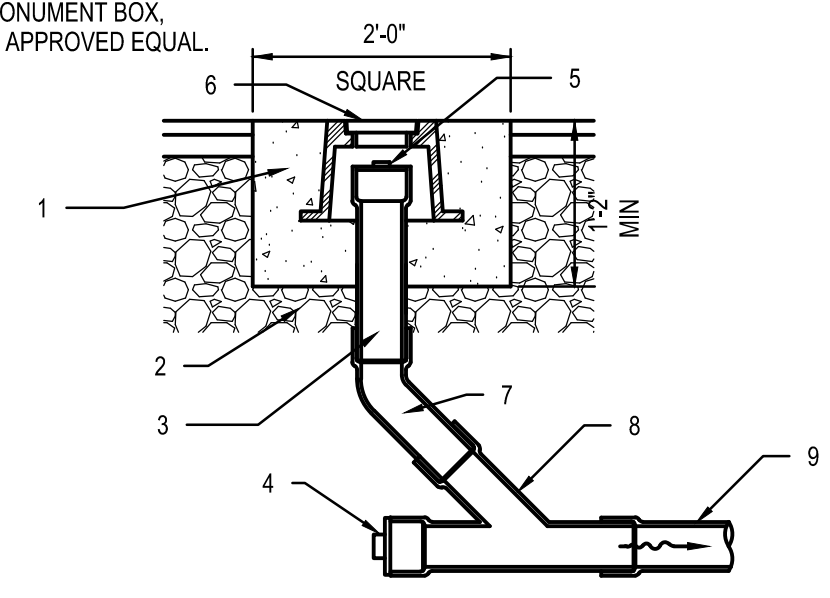
DETAILS

**C-501**

PLOT DATE:

**KEYED NOTES**

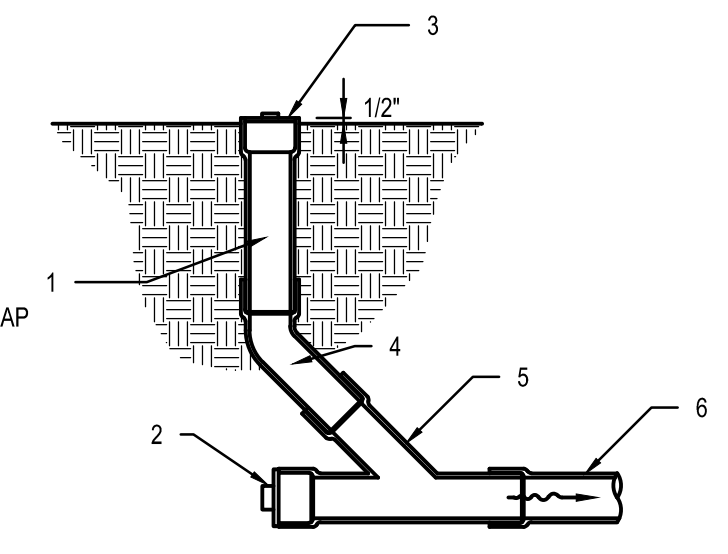
- 1 CONCRETE, MATCH PAVEMENT SPEC.
- 2 6" (MIN.) AGGREGATE BASE
- 3 6" DIA. CLEAN-OUT PIPE
- 4 CAP AND SEAL CONDUIT
- 5 THREADED CLEAN-OUT CAP
- 6 CAST-IRON MONUMENT BOX, EIJW 1565 OR APPROVED EQUAL.
- 7 45° BEND
- 8 WYE
- 9 SEWER



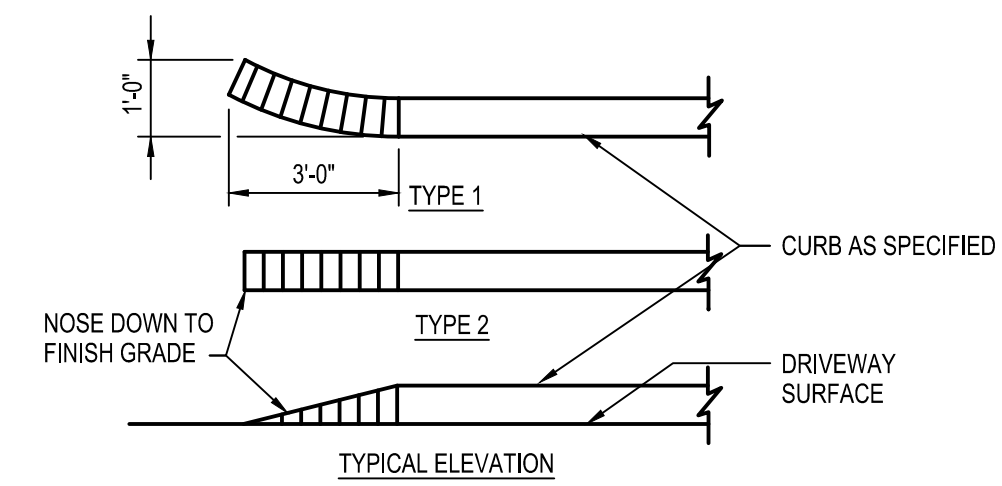
**C1** STORM CLEAN OUT (PAVEMENT AREA)  
N.T.S.

**KEYED NOTES**

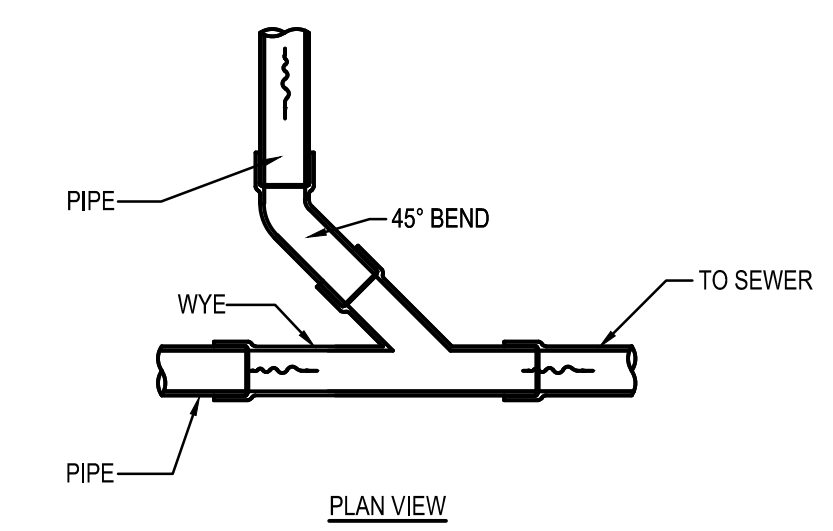
- 1 6" DIA. CLEAN-OUT PIPE
- 2 CAP AND SEAL CONDUIT
- 3 THREADED CLEAN-OUT CAP
- 4 45° BEND
- 5 WYE
- 6 SEWER



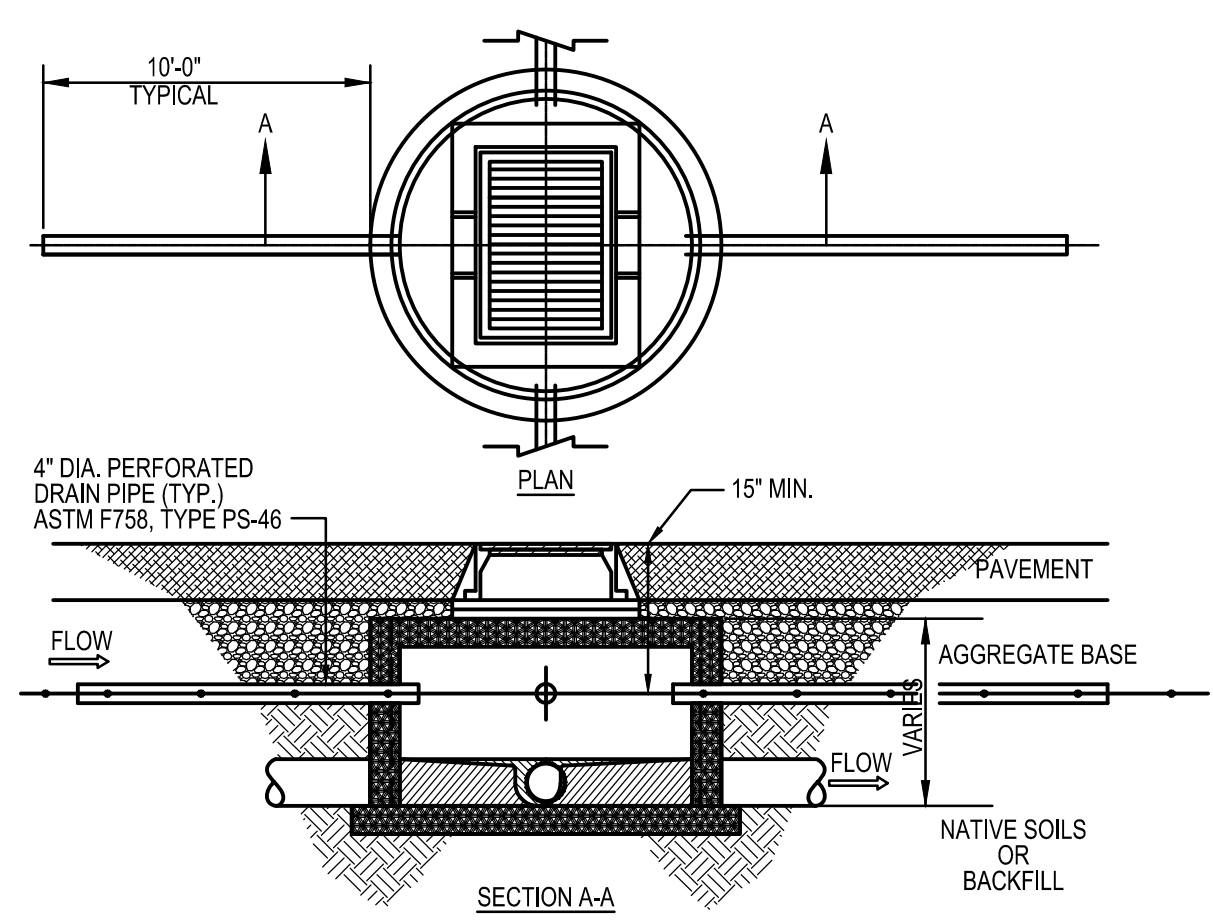
**C2** STORM CLEAN OUT (LAWN AREA)  
N.T.S.



**C3** CONCRETE CURB TAPER  
N.T.S.



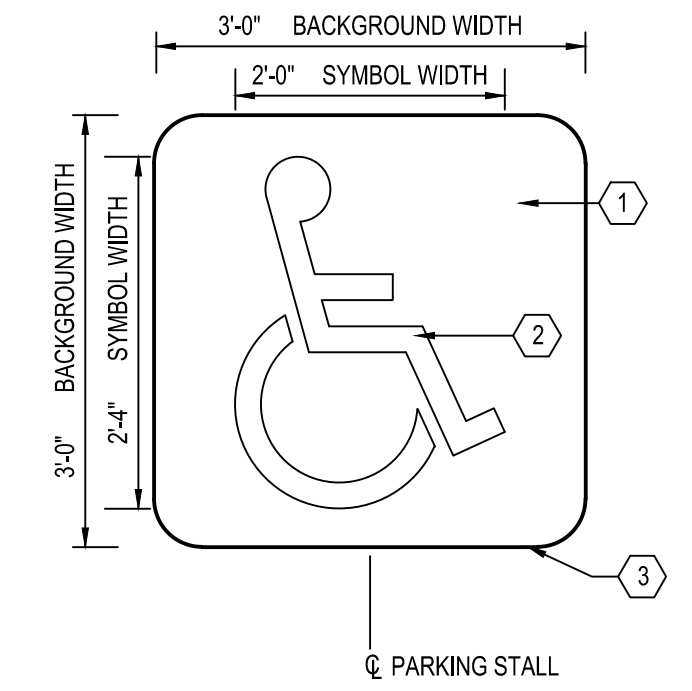
**C4** WYE CONNECTION  
N.T.S.



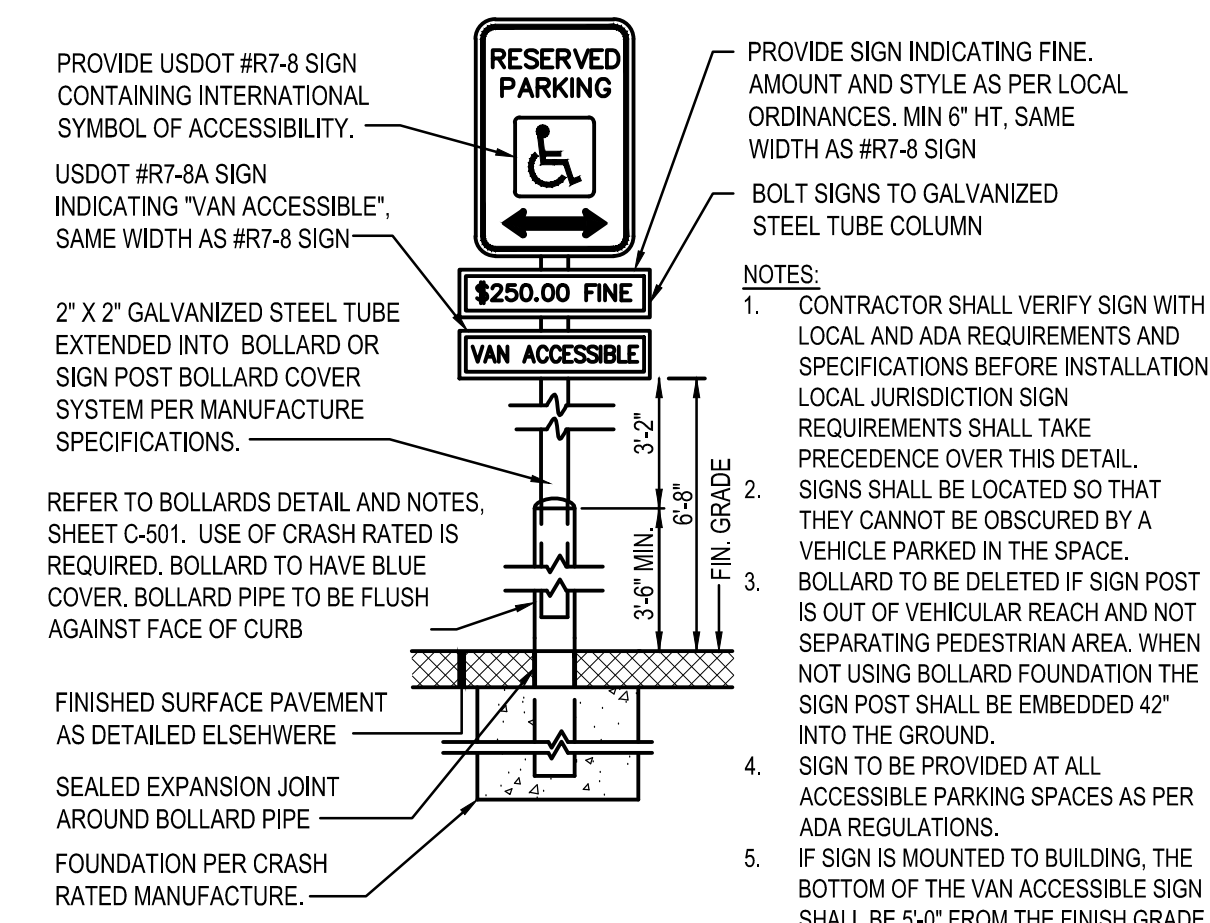
**A1** FINGER DRAIN DETAIL  
N.T.S.

**KEYED NOTES**

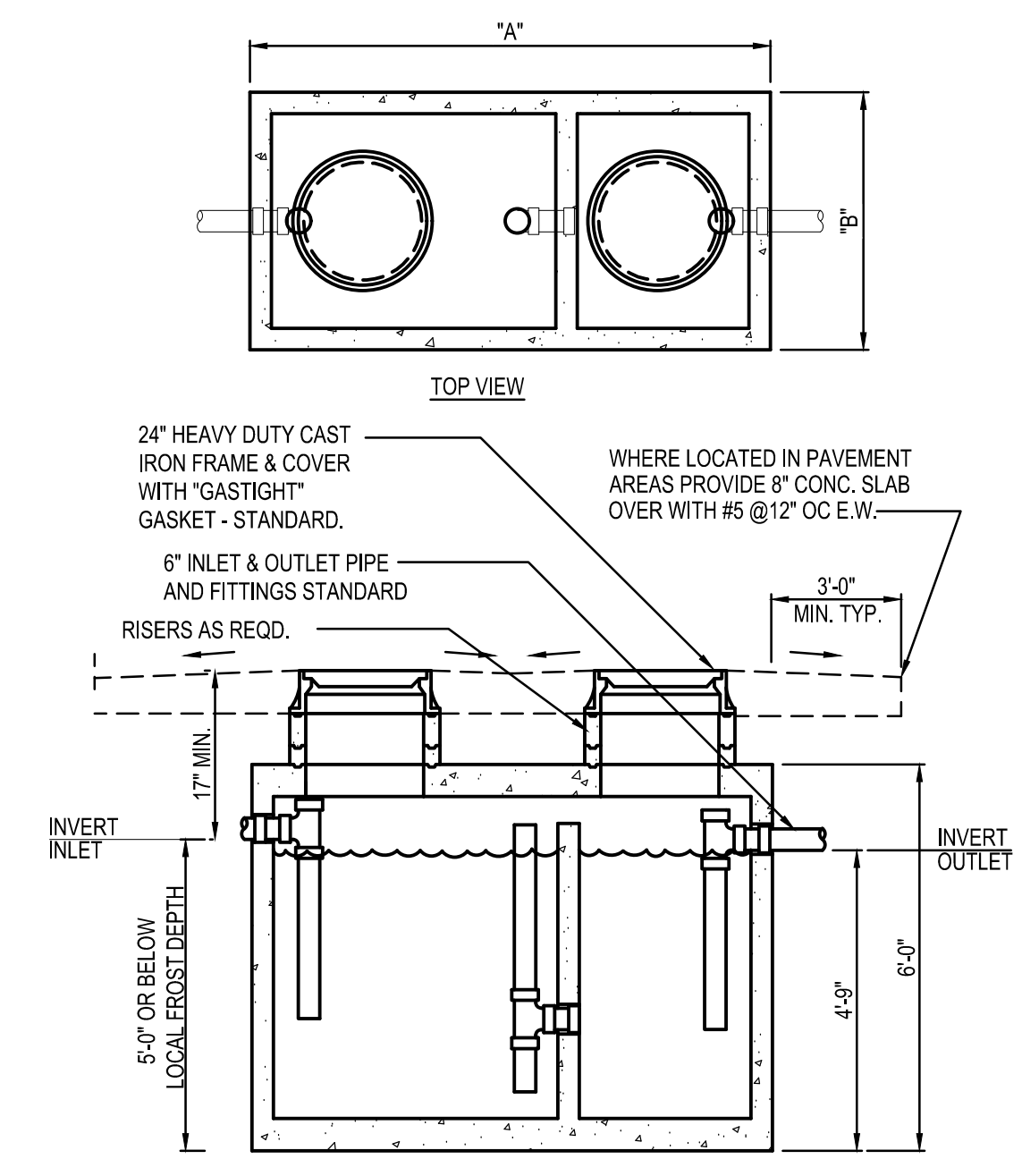
- 1 PAINT BACKGROUND BENJAMIN MOORE M58 SAFETY & ZONE MARKING LATEX M58-30 - BLUE
- 2 PAINT SYMBOL BENJAMIN MOORE M58 SAFETY & ZONE MARKING LATEX M58-01 - WHITE 4" WIDTH
- 3 BOTTOM EDGE OF SYMBOL BOX SHALL MATCH END OF STALL STRIPE AT DRIVE AISLE END OF STALL.



**A2** ADA PAVEMENT SYMBOL  
N.T.S.



**A3** HANDICAPPED PARKING SIGN  
N.T.S.



G.T. SIZE	DIM. "A"	DIM. "B"
500 GALLON	6'-2"	4'-2"
750 GALLON	8'-1"	4'-0"
1000 GALLON	8'-2"	5'-1"
1250 GALLON	8'-6"	5'-9"
1500 GALLON	*	*

\* PER MANUFACTURER SPECIFICATIONS.  
GC SHALL INSTALL GREASE INTERCEPTOR, (G.I.) AS APPROVED BY LOCAL WASTEWATER JURISDICTION. INSTALLATION SHALL INCLUDE VENT, SAMPLING PORT/ MANHOLE, REIN. CONCRETE TRAFFIC LID, ETC. AS REQUIRED PER WASTEWATER DEPARTMENT STANDARDS. G.I. SHALL BE DESIGNED FOR H20 VEHICLE LOADS.

**A4** EXTERIOR GREASE INTERCEPTOR  
N.T.S.

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
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5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
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PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
Macomb, MI 48042



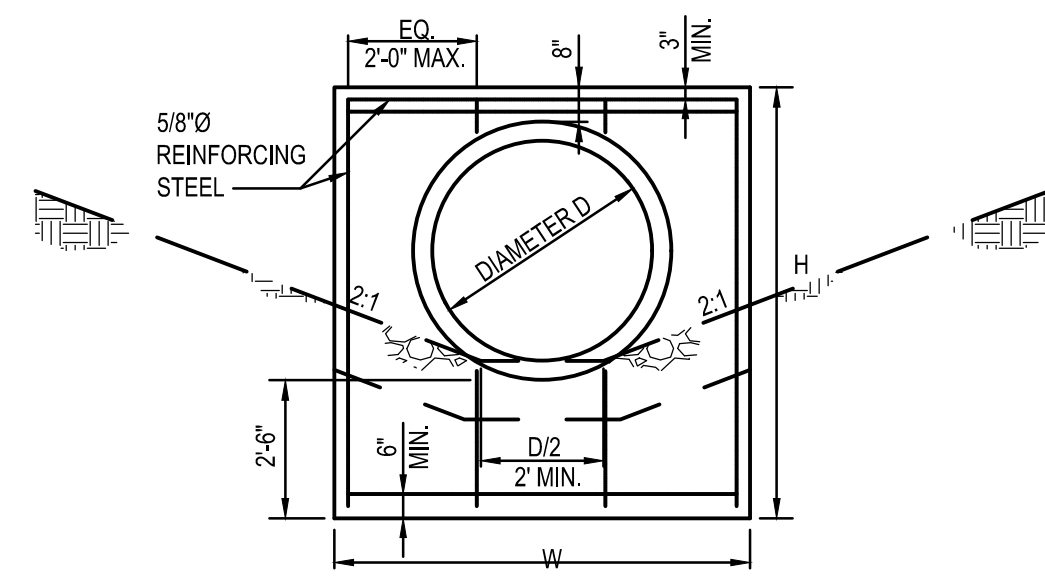
**ENDEAVOR 2.0**

**DETAILS**

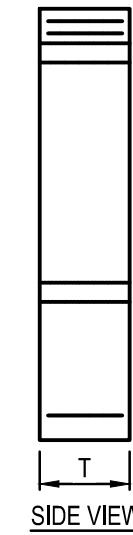
**C-502**

PLOT DATE:

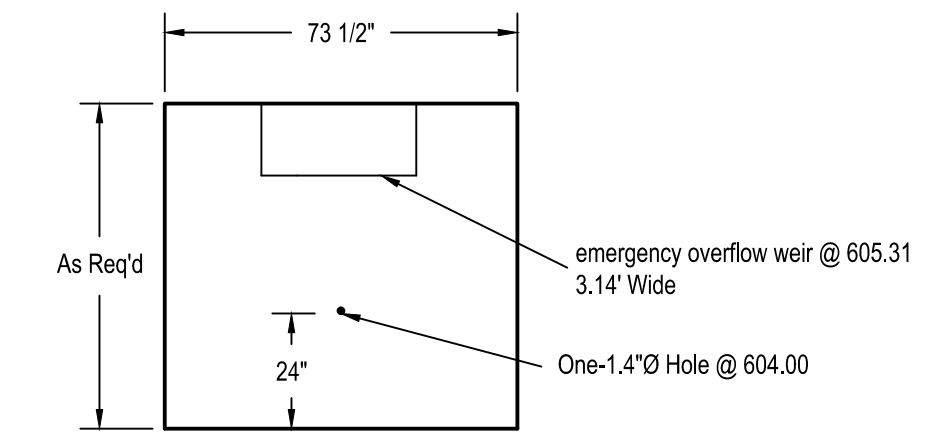
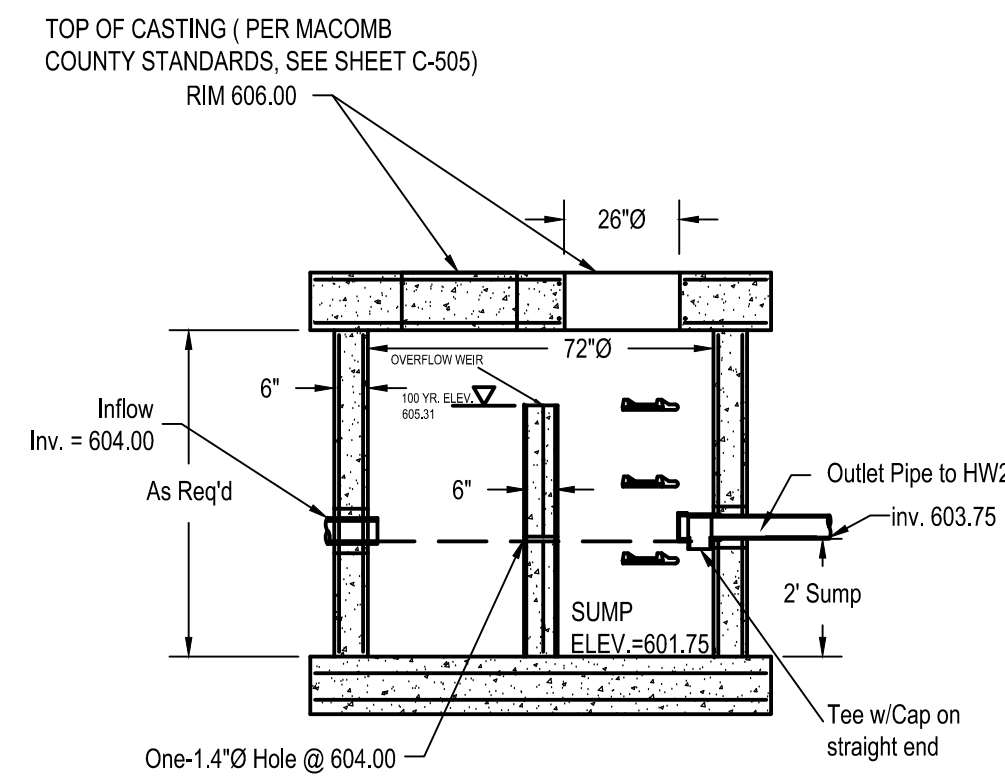
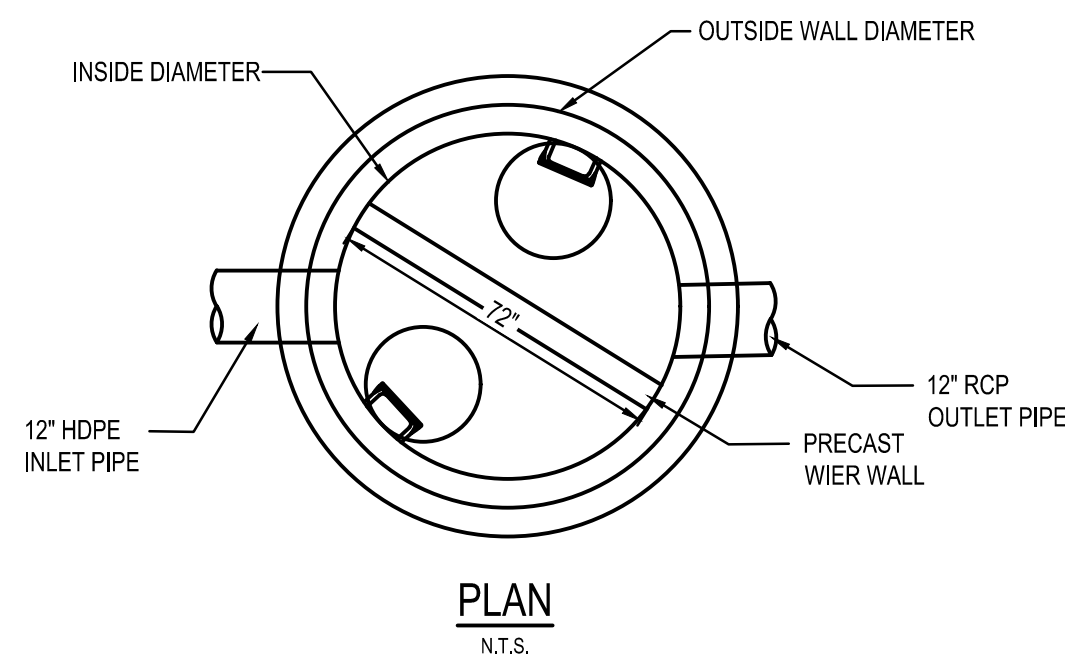




CONCRETE HEADWALL DIMENSIONS			
CIRCULAR			
D	W	H	T
8"	3'-0"	4'-5"	12"
12"	3'-0"	4'-5"	12"
15"	4'-0"	4'-8"	12"
18"	5'-0"	5'-0"	12"

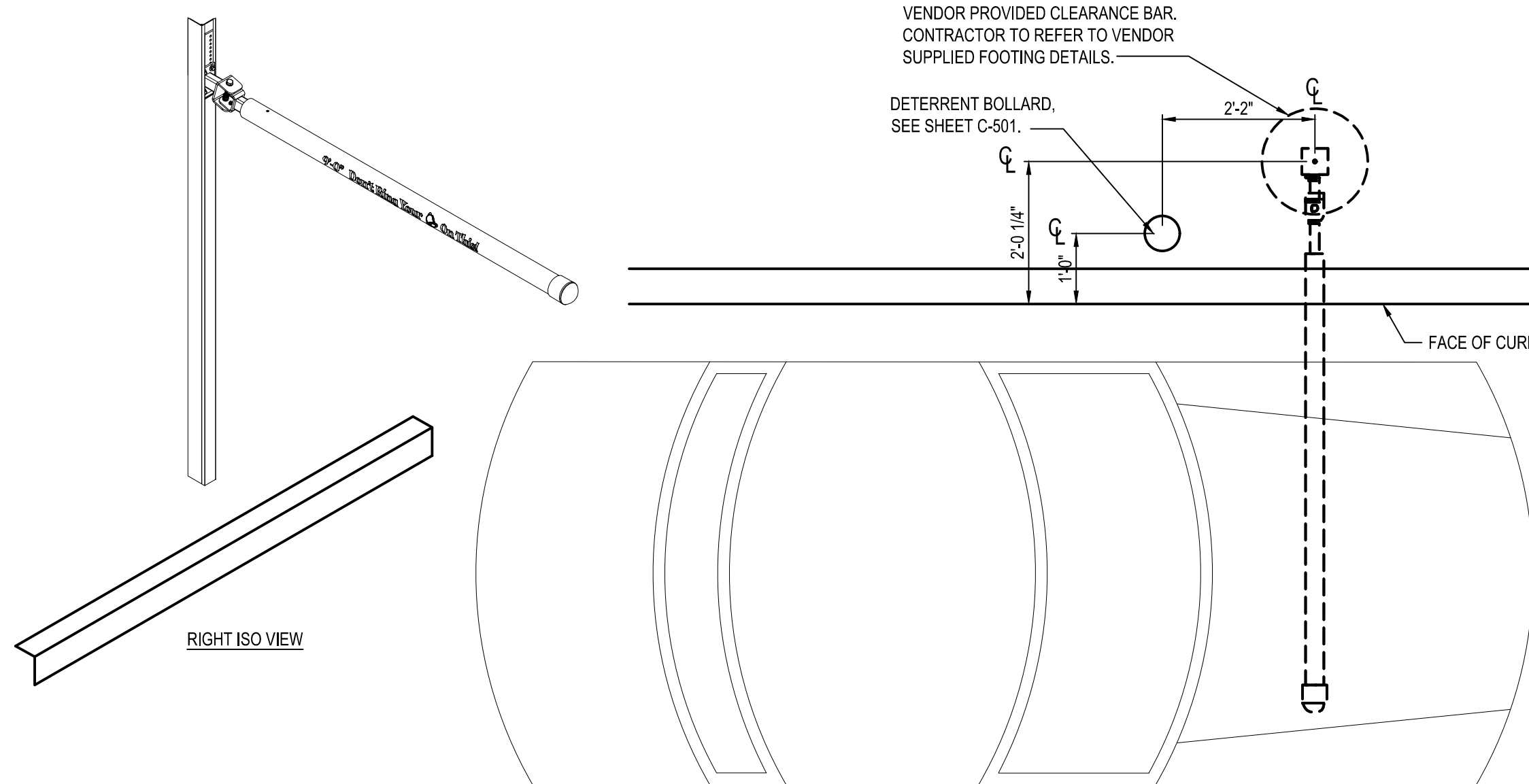


**C2** HEADWALL  
N.T.S.

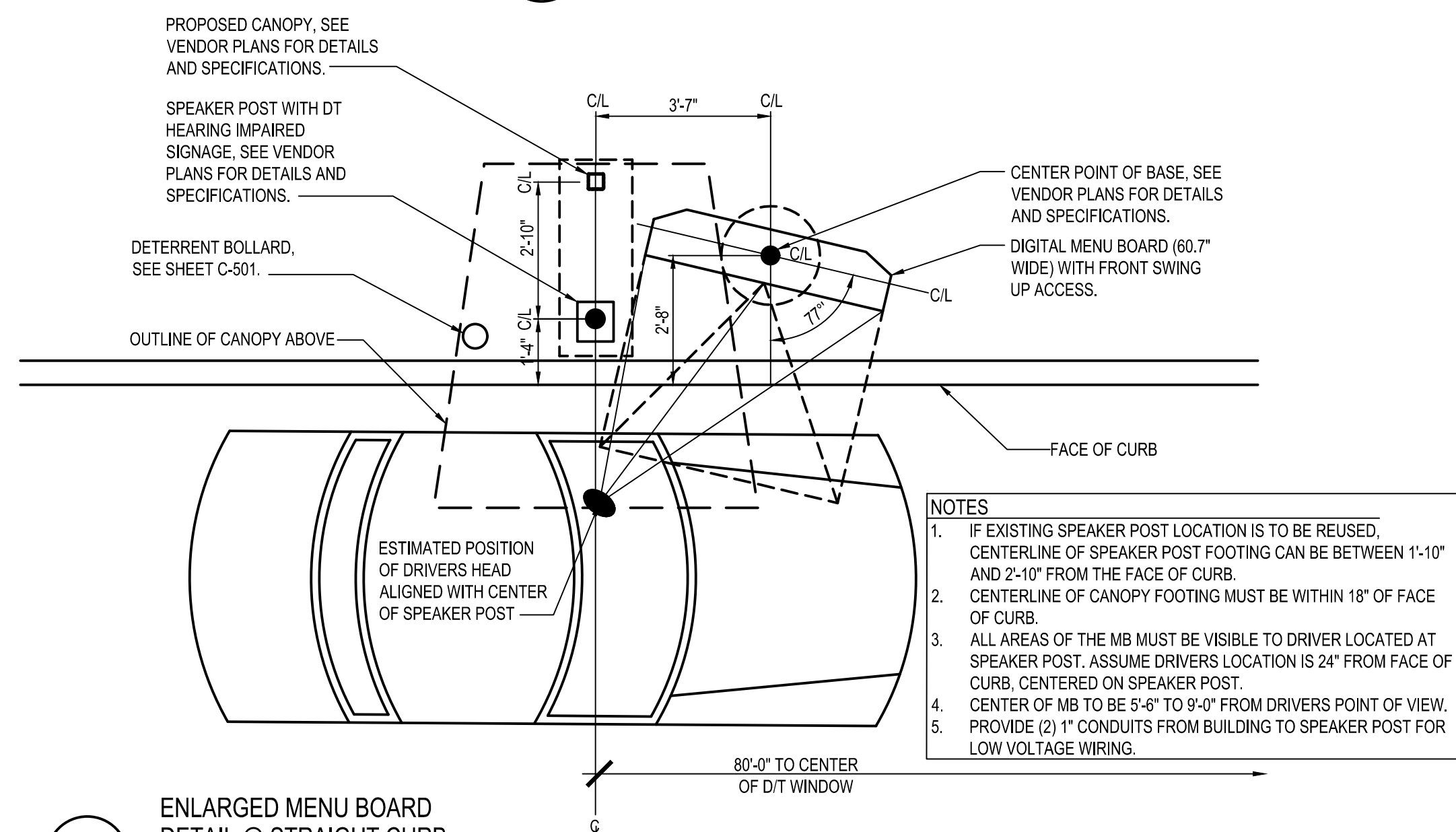


PRECAST WALL SECTION  
N.T.S.

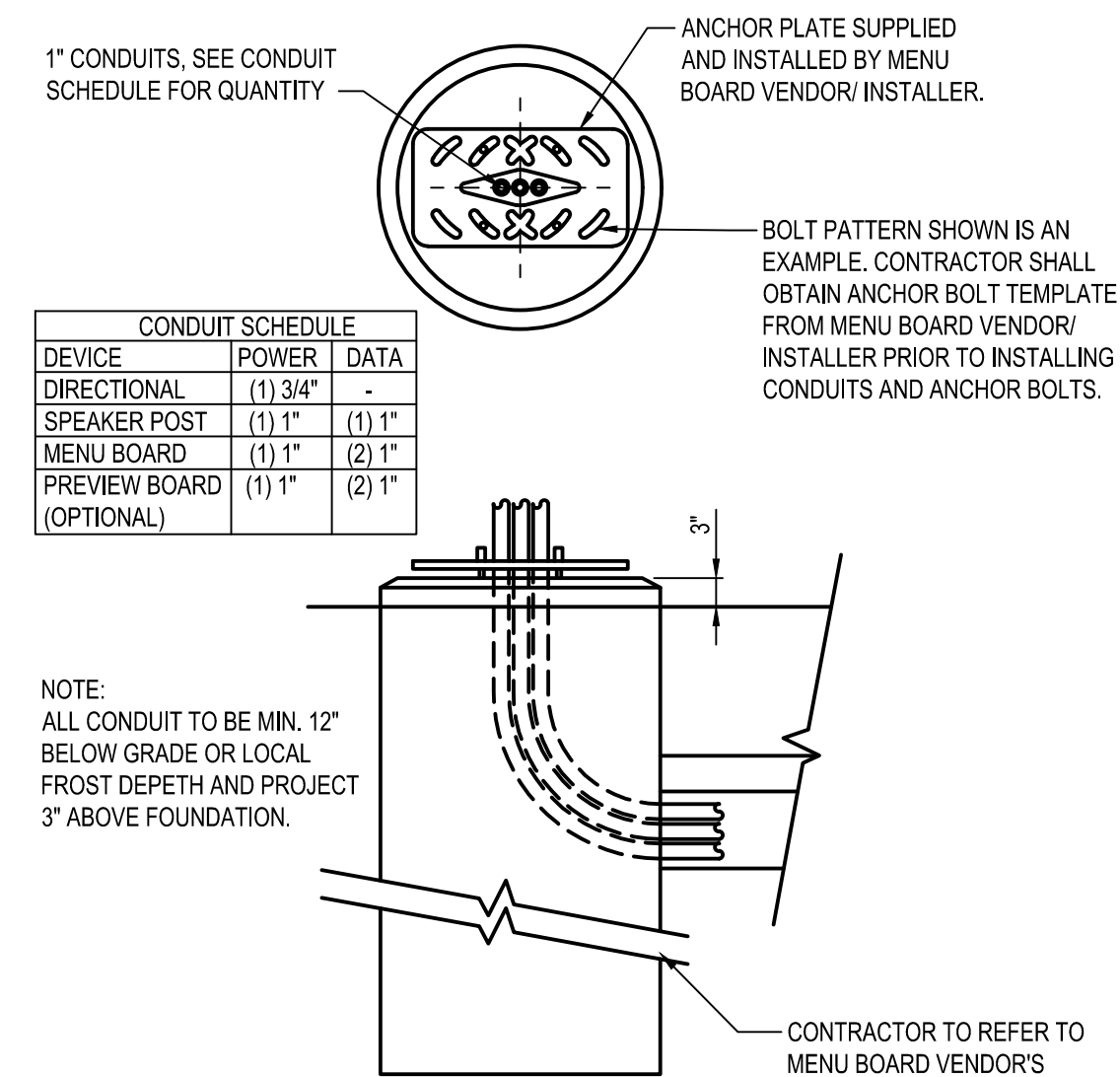
**72" DIAMETER STORM SEWER MANHOLE, SEE SHEET C-505**  
**OUTLET CONTROL STRUCTURE (OCS1)**  
N.T.S.



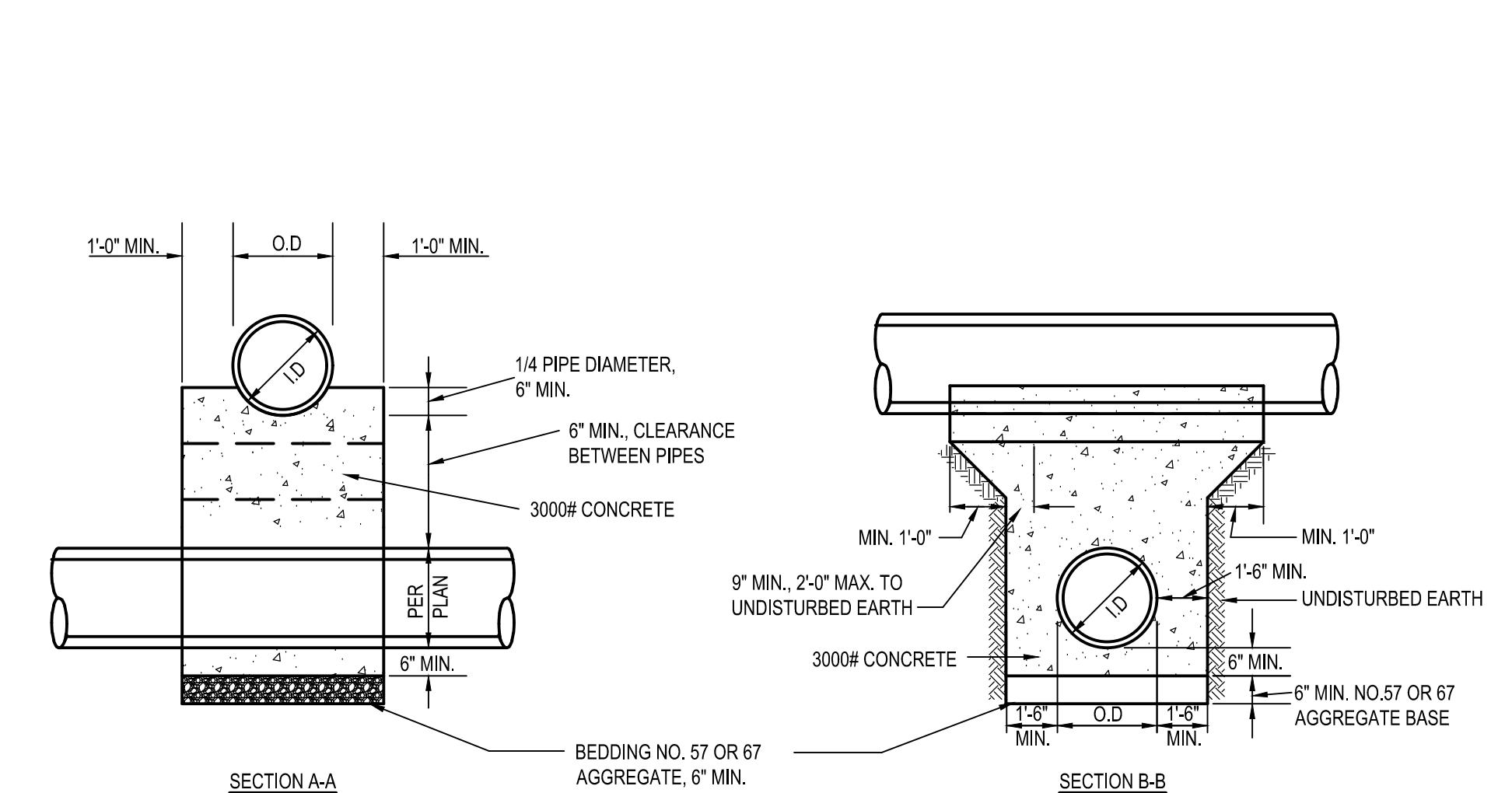
**B2** PORTAL PLACEMENT DETAIL  
N.T.S.



**A1** ENLARGED MENU BOARD  
DETAIL @ STRAIGHT CURB  
N.T.S.



**A2** FOUNDATION CONDUIT DETAIL  
N.T.S.



**A3** CONCRETE ENCASEMENT MONOLITHIC CRADLING OF UPPER PIPE  
FOR CROSSINGS WITH LESS THAN 18" MINIMUM CLEARANCE  
N.T.S.

DATE	REMARKS
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JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
Macomb, MI 48042



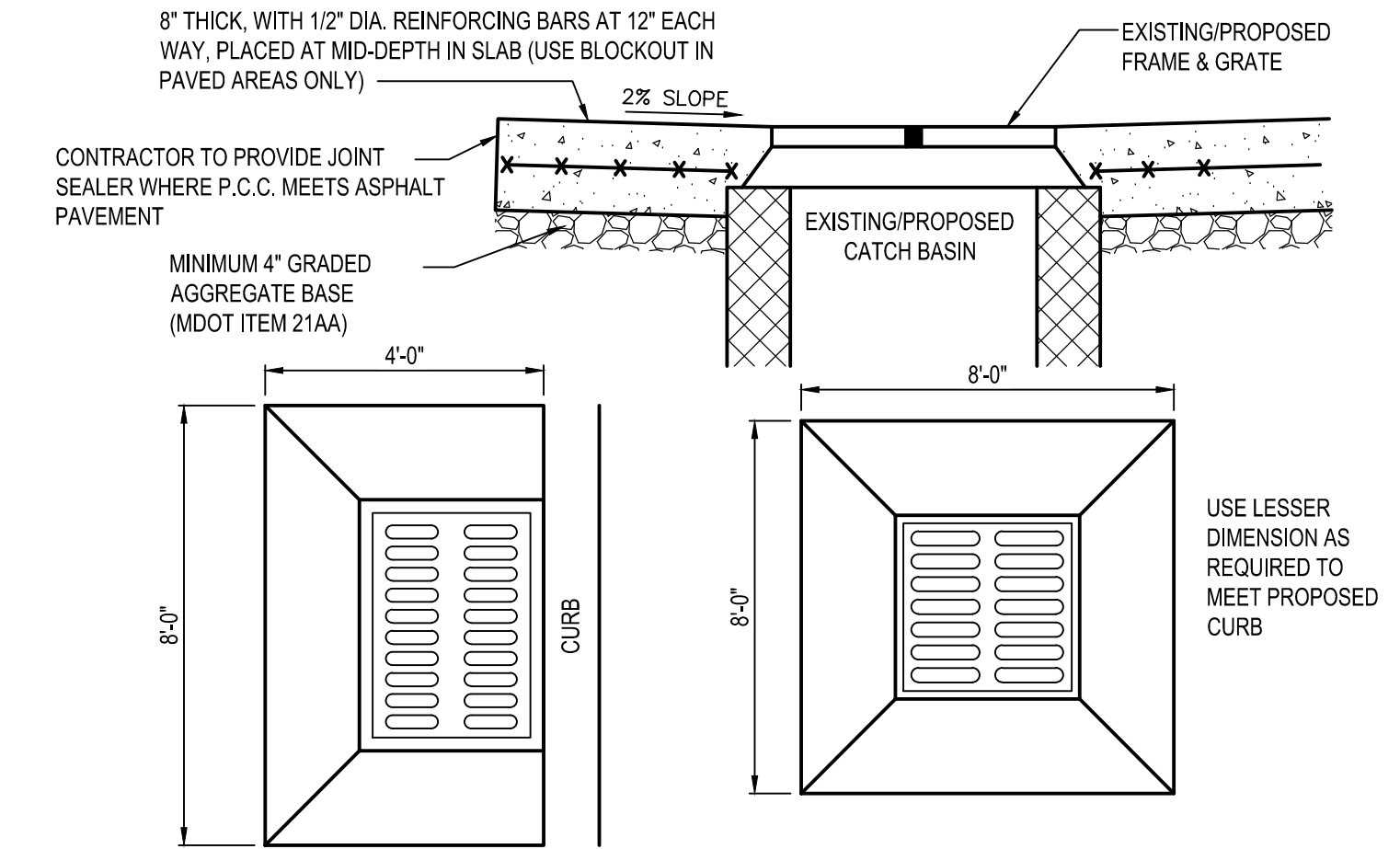
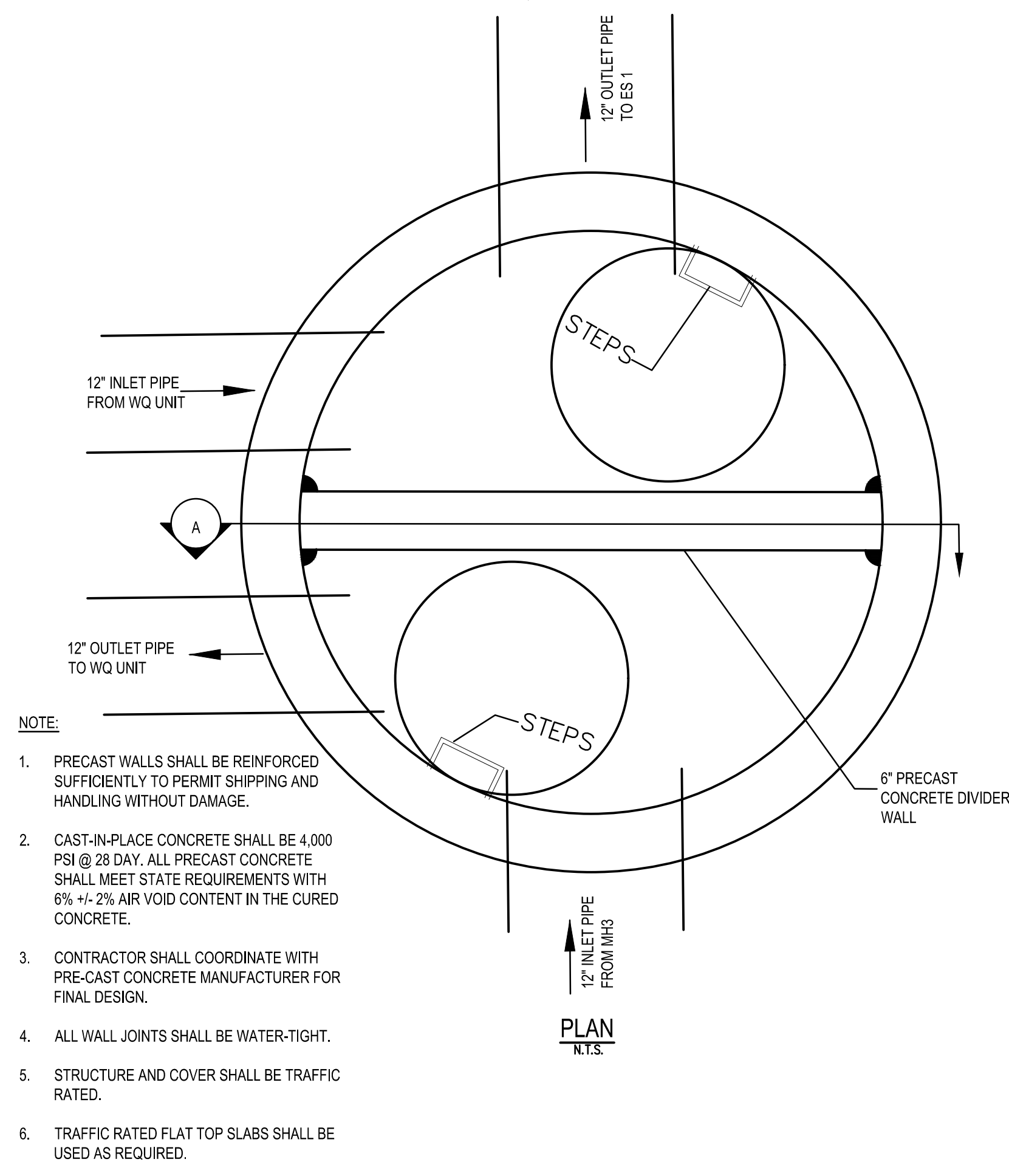
ENDEAVOR 2.0

DETAILS

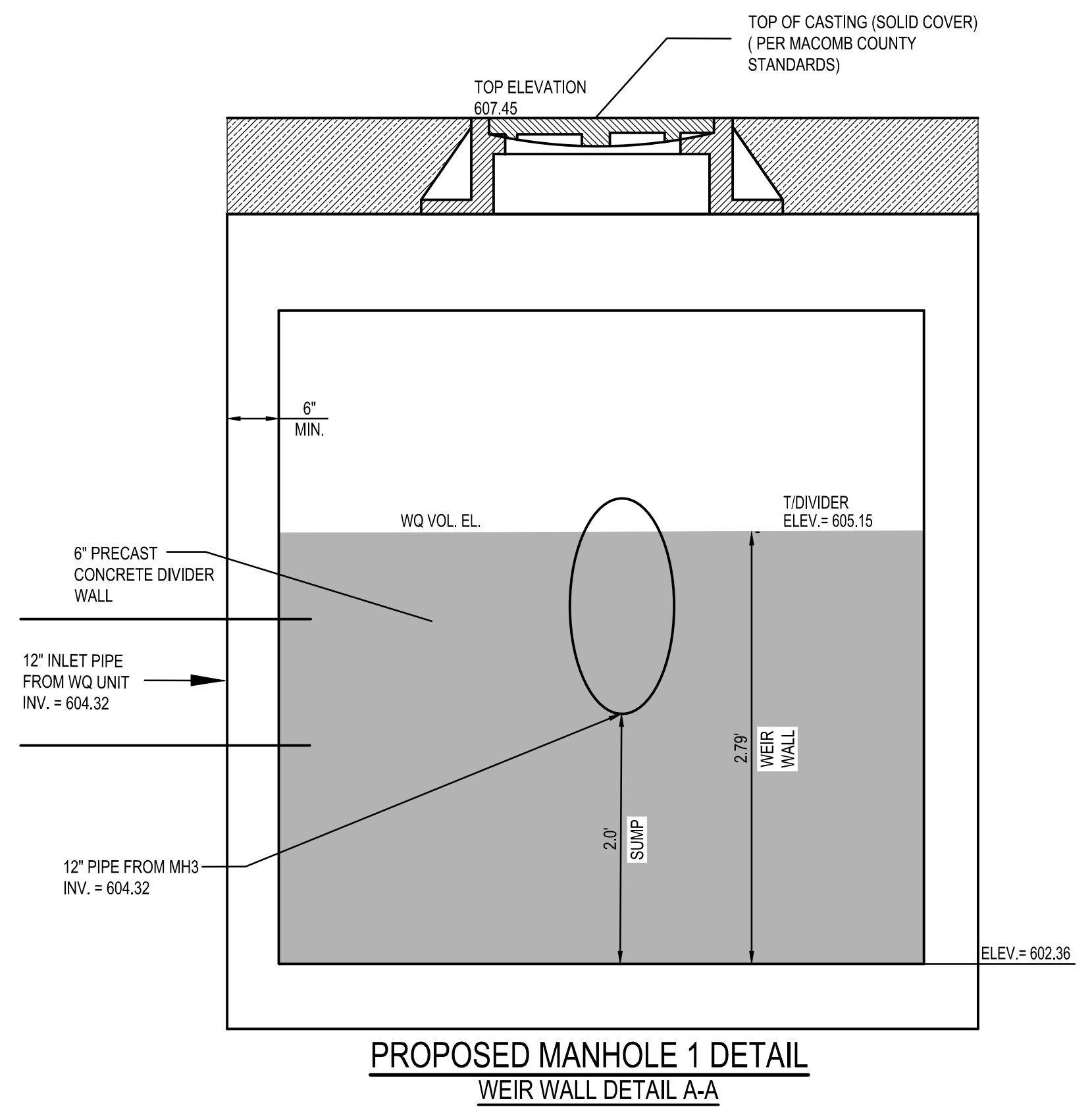
**C-503**

PLOT DATE:

PROPOSED 84" DIA. MANHOLE, SEE SHEET C-505



**C2** CONCRETE COLLAR  
N.T.S.



DATE	REMARKS
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17669 23 Mile Road  
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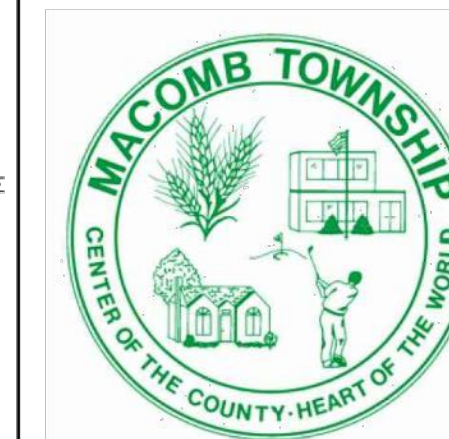


ENDEAVOR 2.0

DETAILS

**C-504**

PLOT DATE:



**MACOMB TOWNSHIP**  
54111 BROUGHTON ROAD  
MACOMB, MI 48042

**3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171**  
For free location of public utility lines

NOTE: UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANIES, CITY/COUNTY AGENCIES AND OTHER VARIOUS SOURCES. UNDERGROUND UTILITIES WHICH ARE ON PRIVATE PROPERTY ARE USUALLY NOT DELINEATED UPON A UTILITY COMPANY'S PUBLISHED PLANS. THEIR LOCATION, IF SHOWN UPON THIS SURVEY, ARE APPROXIMATED FROM FOUND PAINT MARKS/STAKES, ETC. AS LOCATED BY THIS FIRM FROM SOURCES WHICH ARE UNKNOWN. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

**TOWNSHIP OF MACOMB**

**STORM SEWER STANDARD DETAILS**

TOWN 3 NORTH RANGE 13 EAST  
MACOMB TOWNSHIP  
MACOMB COUNTY

NO.	DATE	REVISION
1	10-15-14	SHEET UPDATE
2	11-08-15	SHEET UPDATE
3	05-10-16	SHEET UPDATE
4	01-24-17	SHEET UPDATE
5	07-11-17	SHEET UPDATE

DATE	REMARKS
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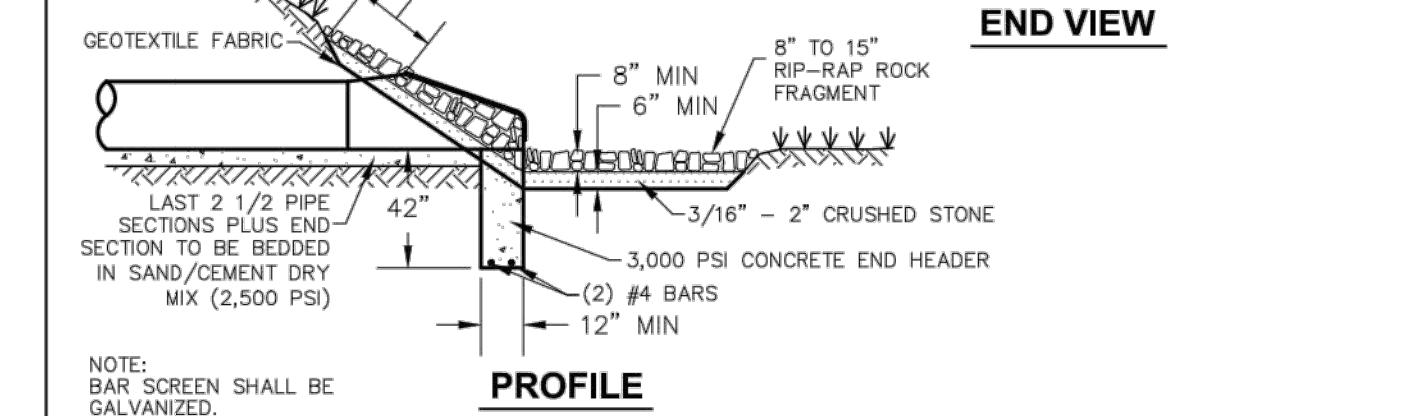
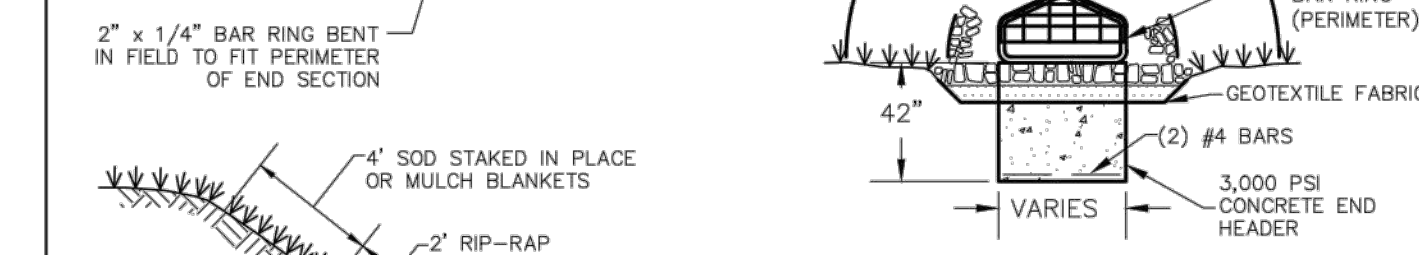
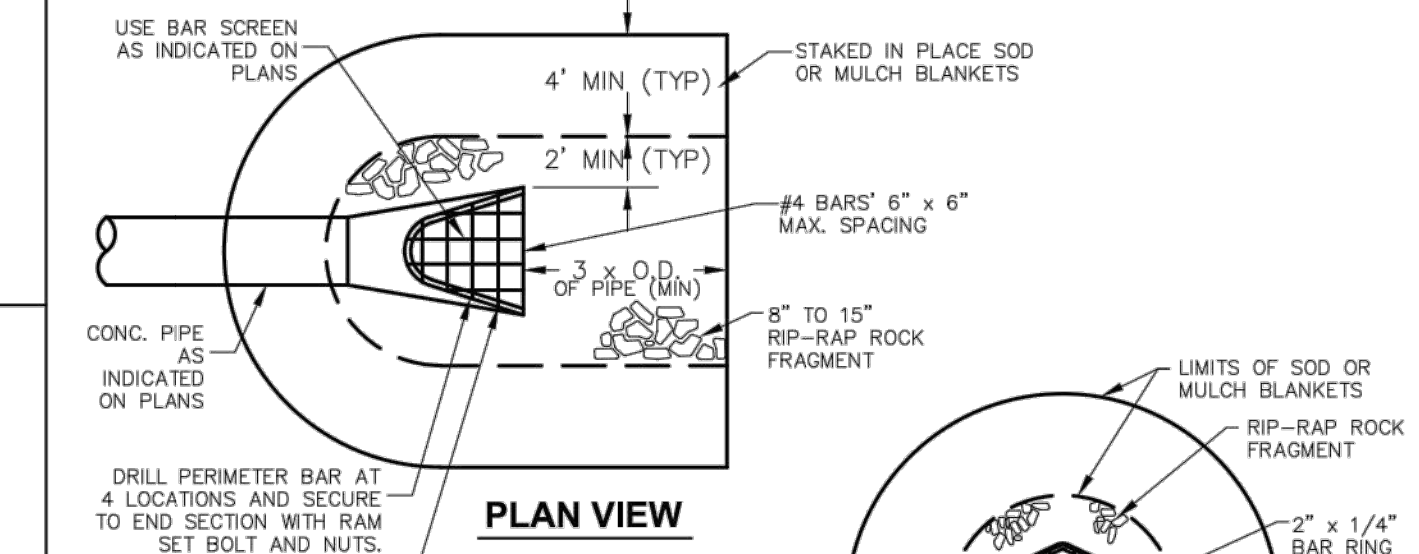
**ENDEAVOR 2.0 TOWNSHIP STORM DETAILS**

**C-505**

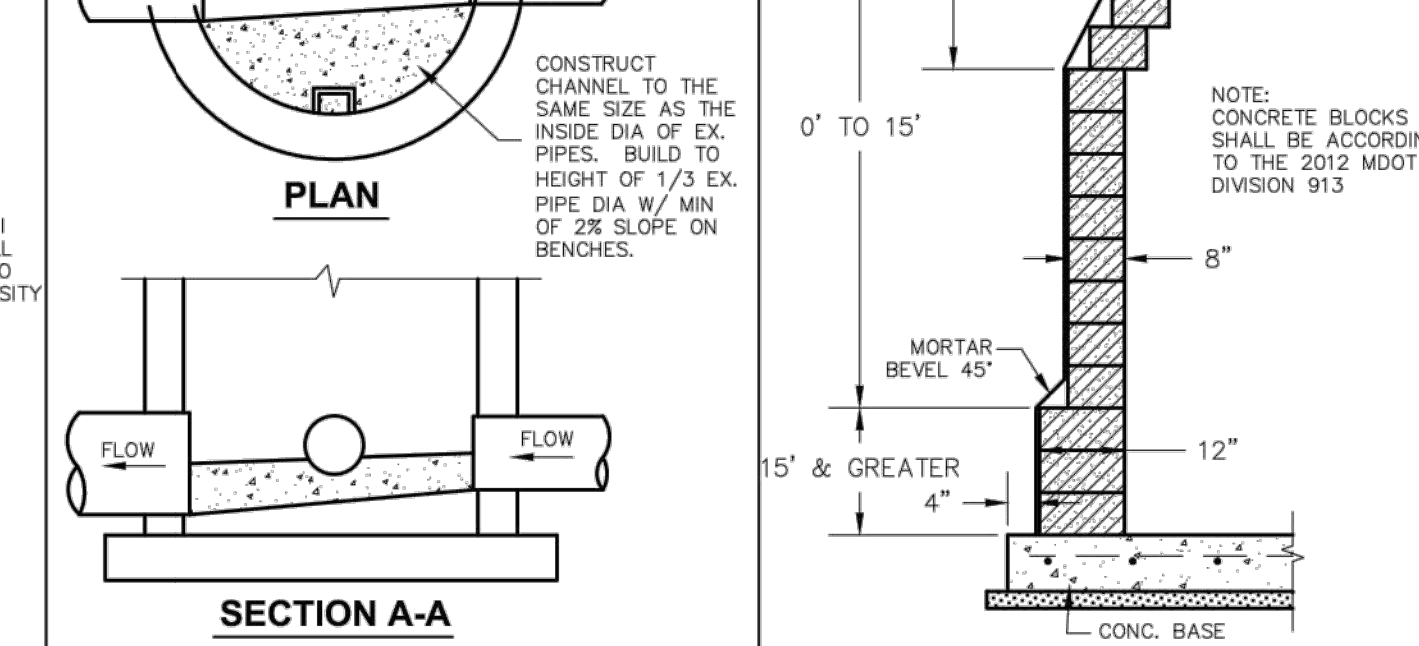
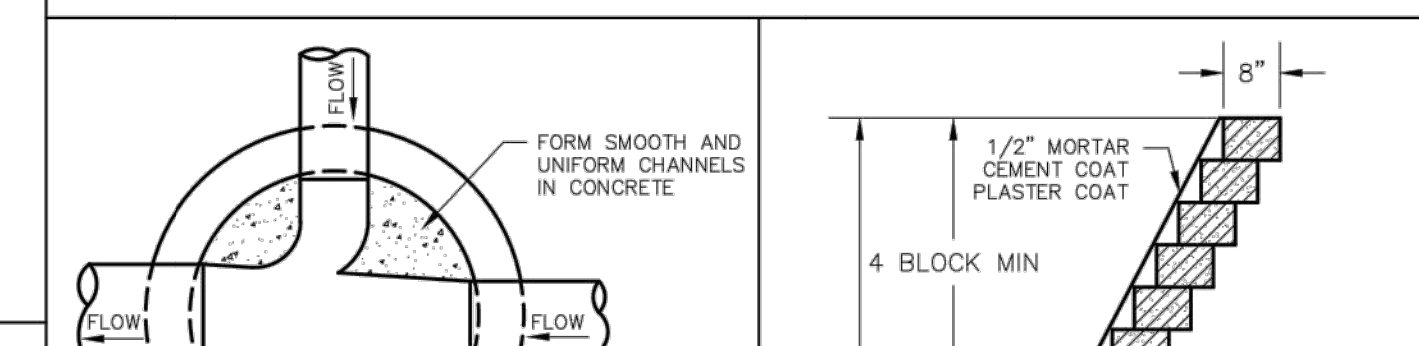
PLOT DATE:

**GENERAL STORM SEWER NOTES**

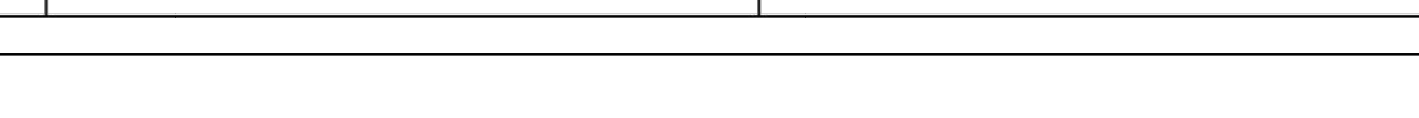
- AT LEAST SEVENTY TWO (72) HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL GIVE NOTIFICATION OF THEIR INTENTION TO BEGIN CONSTRUCTION TO MACOMB TOWNSHIP, THE OFFICE OF THE PUBLIC WORKS COMMISSIONER, MCDOR, MDOT, AND OTHER AGENCIES HAVING JURISDICTION.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY MACOMB TOWNSHIP, AT WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST HAVE IN THEIR POSSESSION A COPY OF A VALID PERMIT TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF, THE STORM WATER DRAINAGE SYSTEM.
- THE CONTRACTOR SHALL SECURE PERMITS FROM THE OFFICE OF THE PUBLIC WORKS COMMISSIONER FOR TAPS AND CROSSINGS OF COUNTY DRAINS AND SHALL PAY THE COSTS OF SAID PERMITS AND THE COST OF ANY INSPECTION CHARGES BY THAT AGENCY FOR WORK DONE UNDER THE PERMITS.
- PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (800-482-7171) FOR THE LOCATION OF UNDERGROUND FACILITIES, AND SHALL ALSO NOTIFY REPRESENTATIVES OF ANY OTHER FACILITIES, LOCATED IN THE VICINITY OF THE WORK, WHICH MAY NOT BE HANDLED BY MISS DIG.
- ALL STORM WATER DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF MACOMB TOWNSHIP, MCDOR, MDOT, AND/OR THE OFFICE OF THE PUBLIC WORKS COMMISSIONER, AS REQUIRED.
- ALL STORM SEWER SHALL BE REINFORCED CONCRETE PIPE CONSTRUCTED TO ASTM C76 WITH CLASS II OR HIGHER AS DESIGNATION ON PLANS. THE TOWNSHIP MAY ALLOW PVC SDR 23.5 SCHEDULE 40 OR TRUSS PIPE FOR ROOF DRAIN CONNECTIONS TO MANHOLES OR CATCH BASINS. CORRUGATED STEEL PIPE (CSP) MAY BE USED FOR CULVERTS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL STORM SEWER BEDDING SHALL BE STANDARD BEDDING.
- ALL BUILDING SUMP PUMP SERVICE CONNECTIONS SHALL BE 3" PVC SCHEDULE 40 PIPE AND SHALL BE CONNECTED AT MANHOLES AND CATCH BASINS. NO BLIND TAPS TO THE STORM SEWER SHALL BE ACCEPTED.
- UNLESS OTHERWISE NOTED ON THE PLANS, STRUCTURE FRAME AND COVERS SHALL BE AS FOLLOWS:
  - MH IN CONC. ROADWAYS EJV 1047 - TYPE B VENTED COVER
  - MH IN ASPHALT ROADWAYS EJV 1048 - TYPE B VENTED COVER
  - MH OUTSIDE OF ROADWAYS EJV 1040 - TYPE B VENTED COVER
  - CB IN CONC. ROADS W/ MOUNTABLE CONC. CURBS EJV 5100 - TYPE M1 5105 GRATE
  - CB IN ASPHALT ROADS W/ MOUNTABLE CONC. CURBS EJV 5100 - TYPE M1 5105 GRATE
  - CB IN YARD AREAS EJV 1040 - TYPE N OVAL GRATE
  - CB IN STANDARD STRAIGHT CURBS EJV 7045 - W/ TYPE M2 ADJUSTING GRATE
  - CB IN PARKING LOTS AND DRIVEWAYS EJV 5100 - W/ TYPE M1 5105 GRATE
- ALL CONCRETE STORM SEWER JOINTS SHALL HAVE PREMIUM RUBBER O-RINGS OR PROFILE GASKETS AND SHALL CONFORM TO ASTM C-443. BITUMINOUS COMPOUND JOINT FILLER MATERIAL MAY BE ALLOWED FOR REAR YARD STORM SEWER CONNECTIONS TO MANHOLES OR CATCH BASINS. CORRUGATED STEEL PIPE (CSP) MAY BE USED FOR CULVERTS.
- ONLY NEW UNDAMAGED STORM SEWER PIPE SHALL BE USED. MACOMB TOWNSHIP SHALL HAVE THE RIGHT TO REJECT ANY AND ALL PIPE.



**STORM SEWER OUTLET END SECTION DETAIL**  
SCALE: NONE

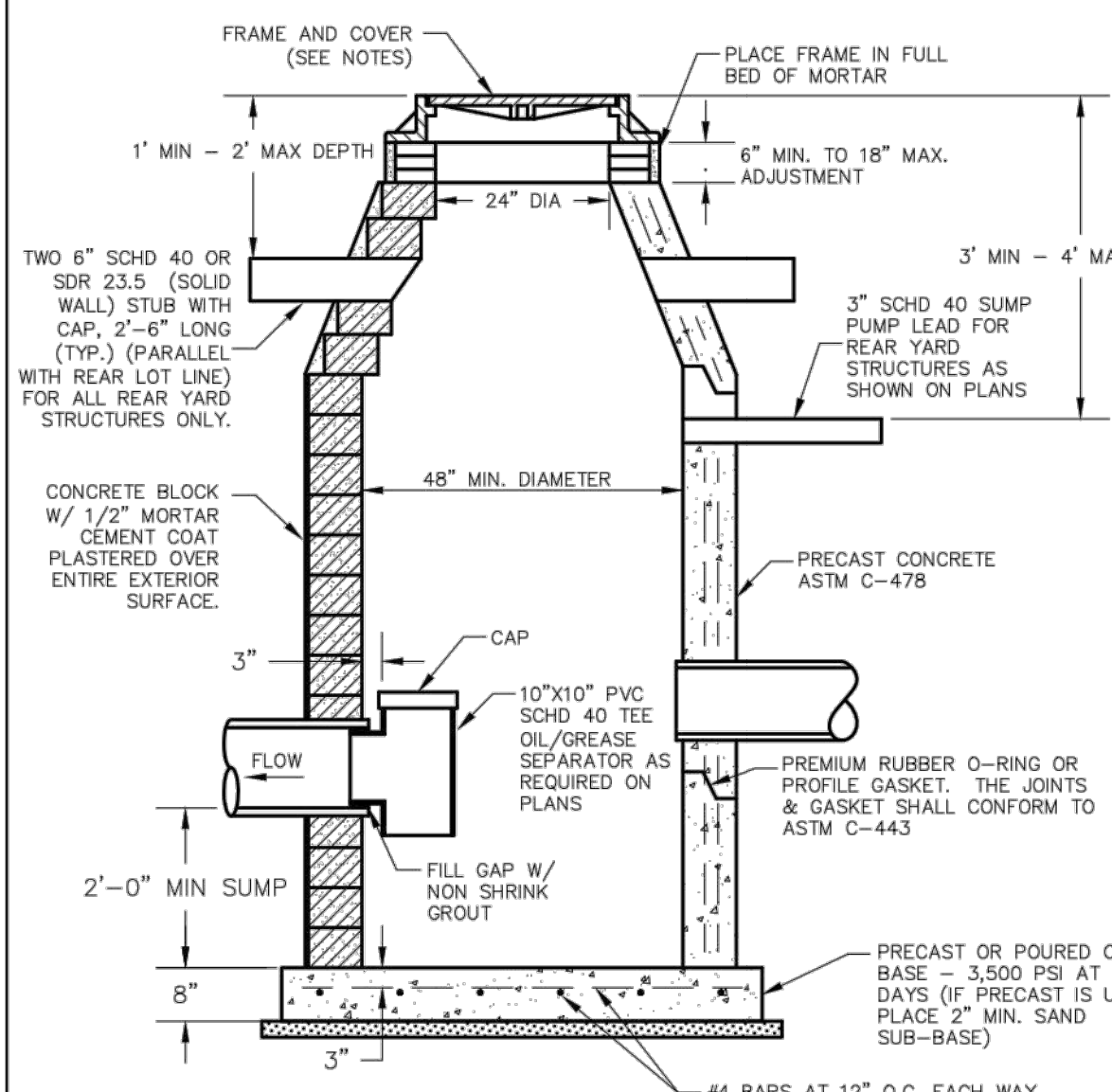


**CHANNEL DETAIL**  
SCALE: NONE



**SPECIAL CATCH BASIN NOTES:**

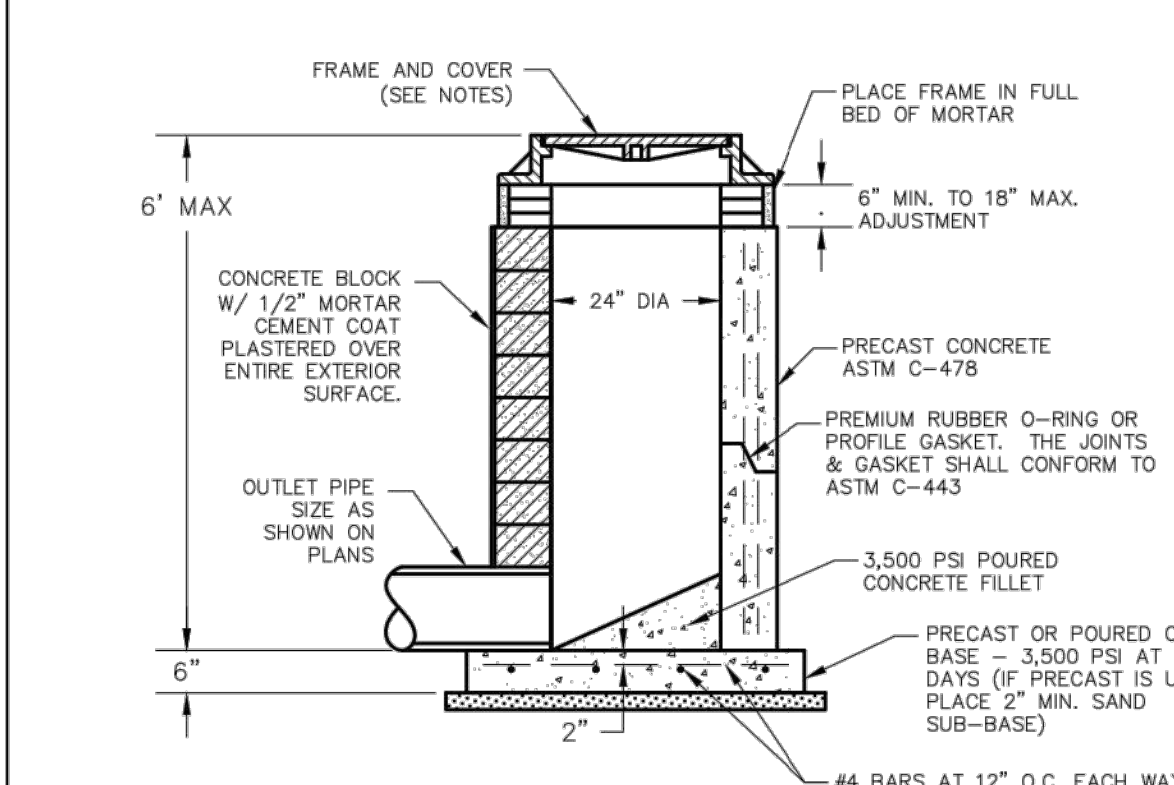
- DIAMETER OF "YARD" CATCH BASIN MAY BE REDUCED TO 36" PROVIDED THERE IS ONLY ONE (1) PIPE IN THE STRUCTURE AND THE DISTANCE TO THE OUTLET MANHOLE IS LESS THAN 150 FEET.
- STEPS SHALL BE PLACED IN ALL CATCH BASINS MORE THAN 7" DEEP OR CATCH BASINS WITH OIL/GREASE SEPARATORS. STEPS SHALL BE FACTORY INSTALLED BY MA INDUSTRIES, PS-1 (PRECAST MH), PS-1B (BLOCK MH) POLYPROPYLENE, OR APPROVED EQUAL. AT 16" O.C. BOTTOM STEP 24" (MAX.) ABOVE BOTTOM, AND TOP STEP 16" BELOW TOP OF STRUCTURE @ 45° FROM 1/2" OF PIPE.
- IF STEPS ARE TO BE INSTALLED, THAN ECCENTRIC CONES SHALL BE INSTALLED (PER ASTM C-478 FOR PRE-CAST STRUCTURES).



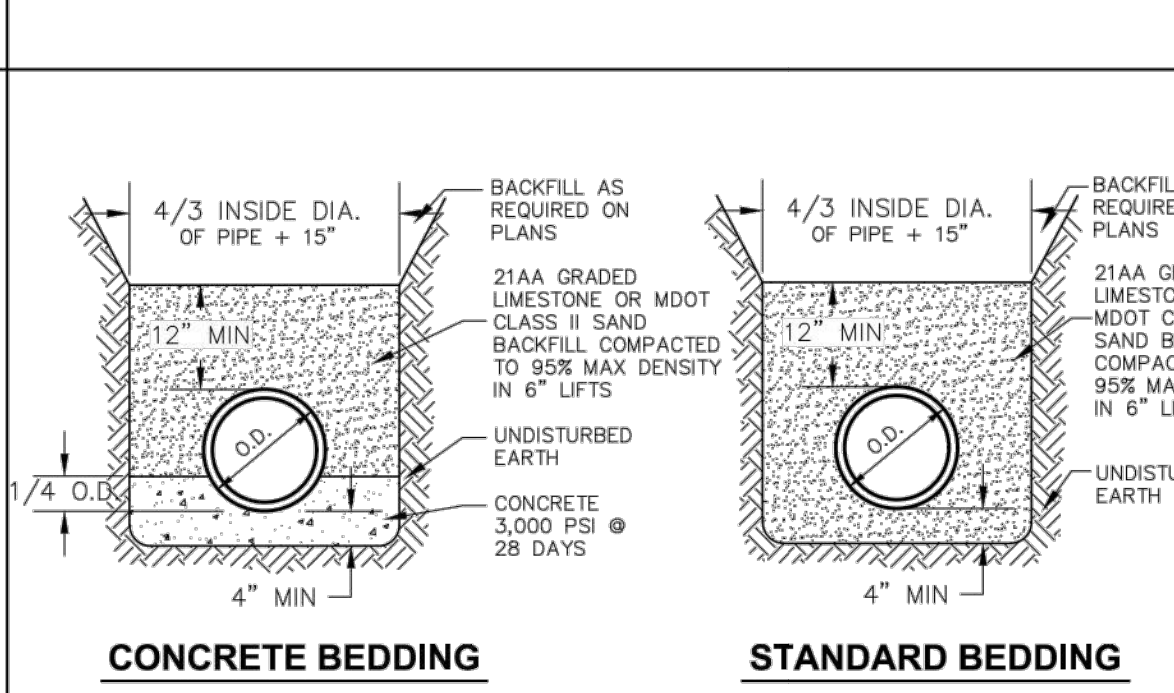
**STORM SEWER CATCH BASIN**  
SCALE: NONE

**SPECIAL INLET NOTES:**

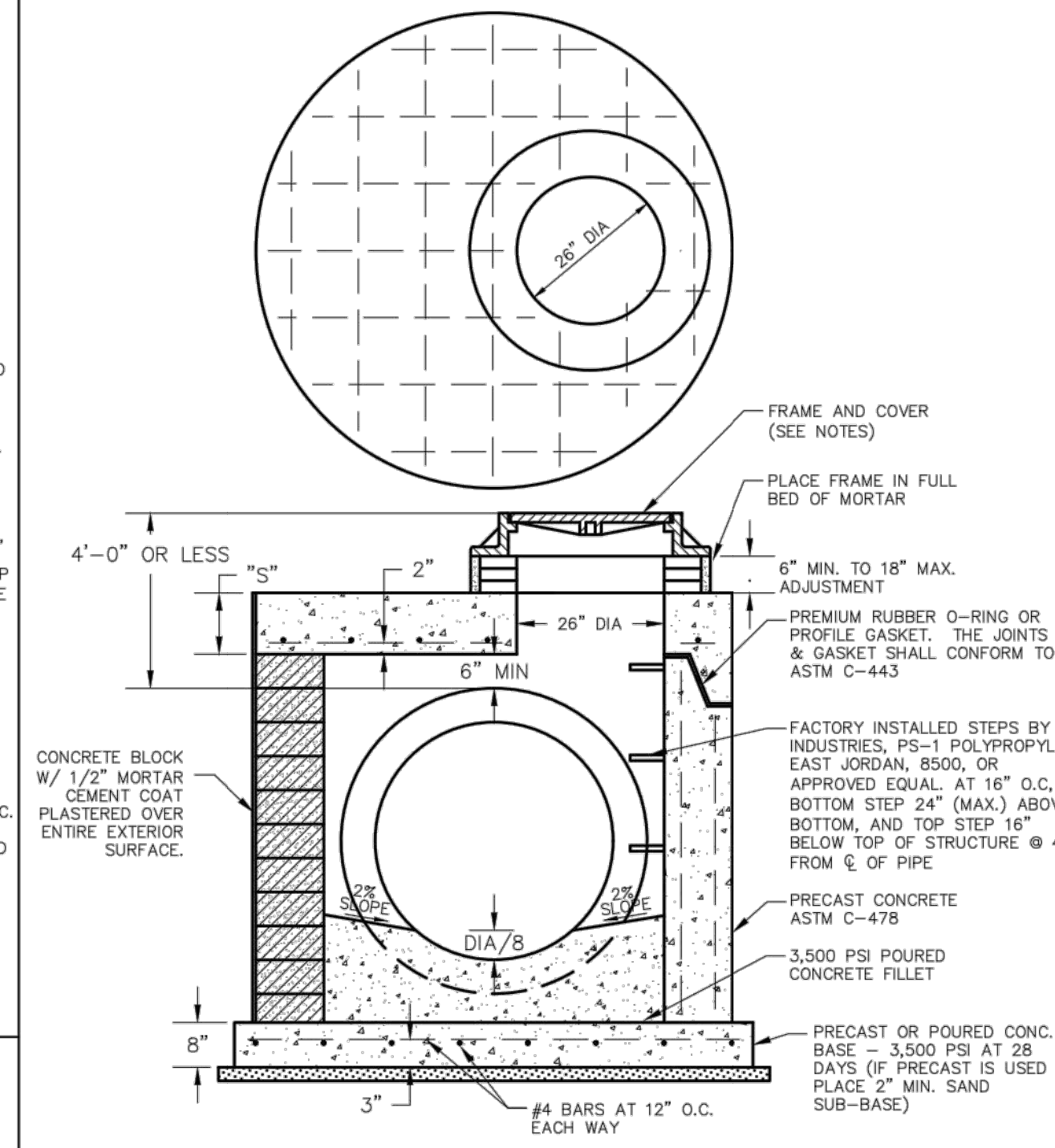
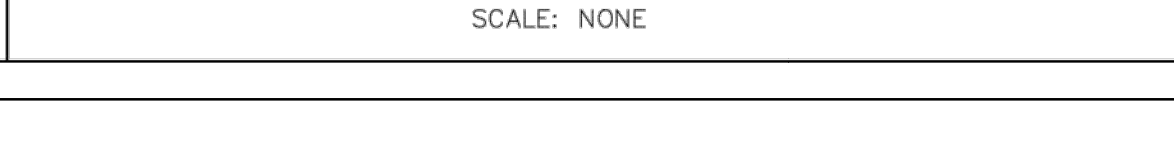
- INLET SHALL NOT BE USED FOR YARD DRAINAGE.
- INLET SHALL NOT BE USED IN COUNTY ROAD RIGHT-OF-WAY.
- OTHER THAN ABOVE, INLET MAY BE USED, PROVIDED:
  - A. THE INLET DISCHARGES INTO CATCH BASIN LOCATED WITHIN 75 FEET.
  - B. NOT MORE THAN ONE INLET DISCHARGES INTO A CATCH BASIN.



**STORM SEWER INLET**  
SCALE: NONE



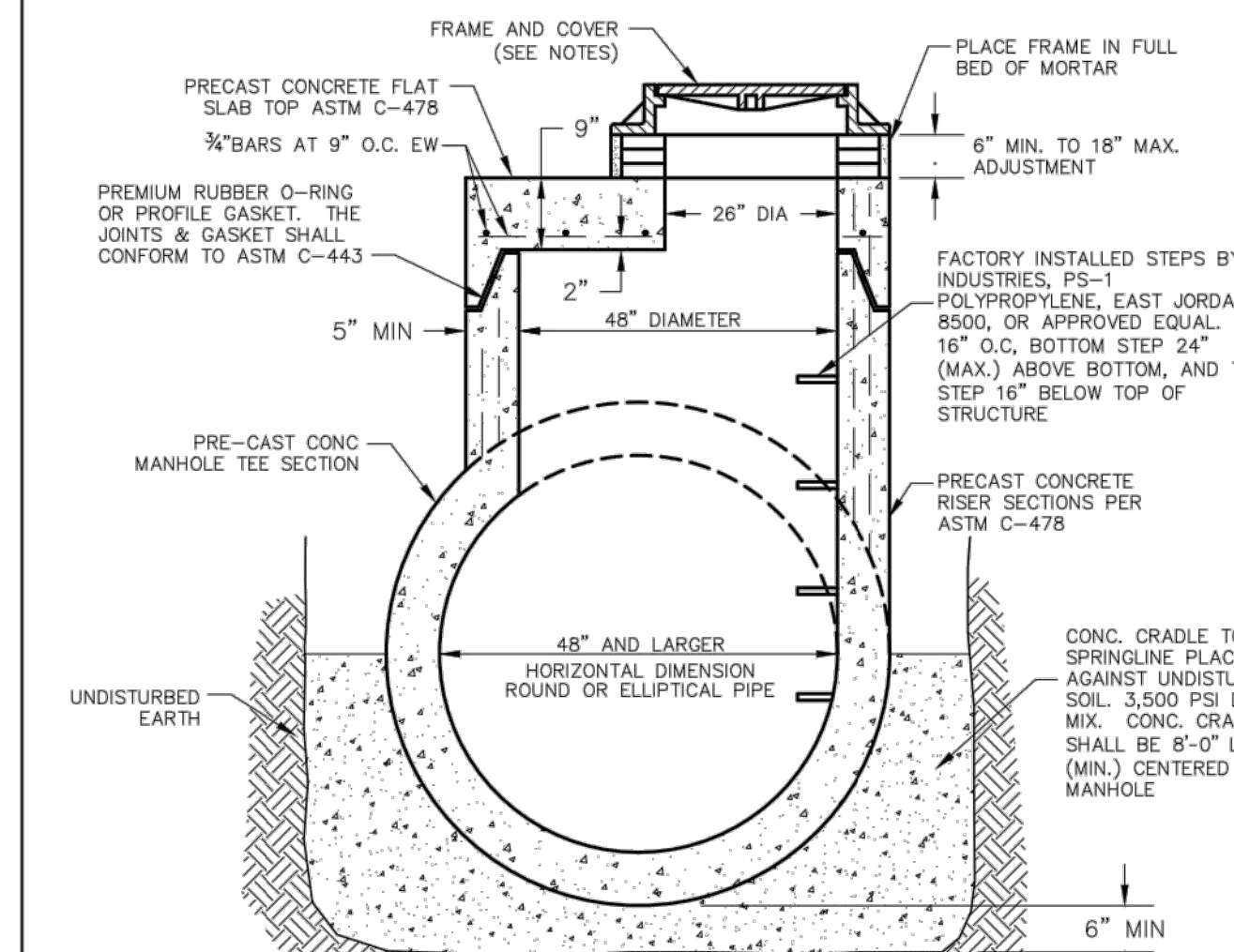
**STANDARD BEDDING**  
SCALE: NONE



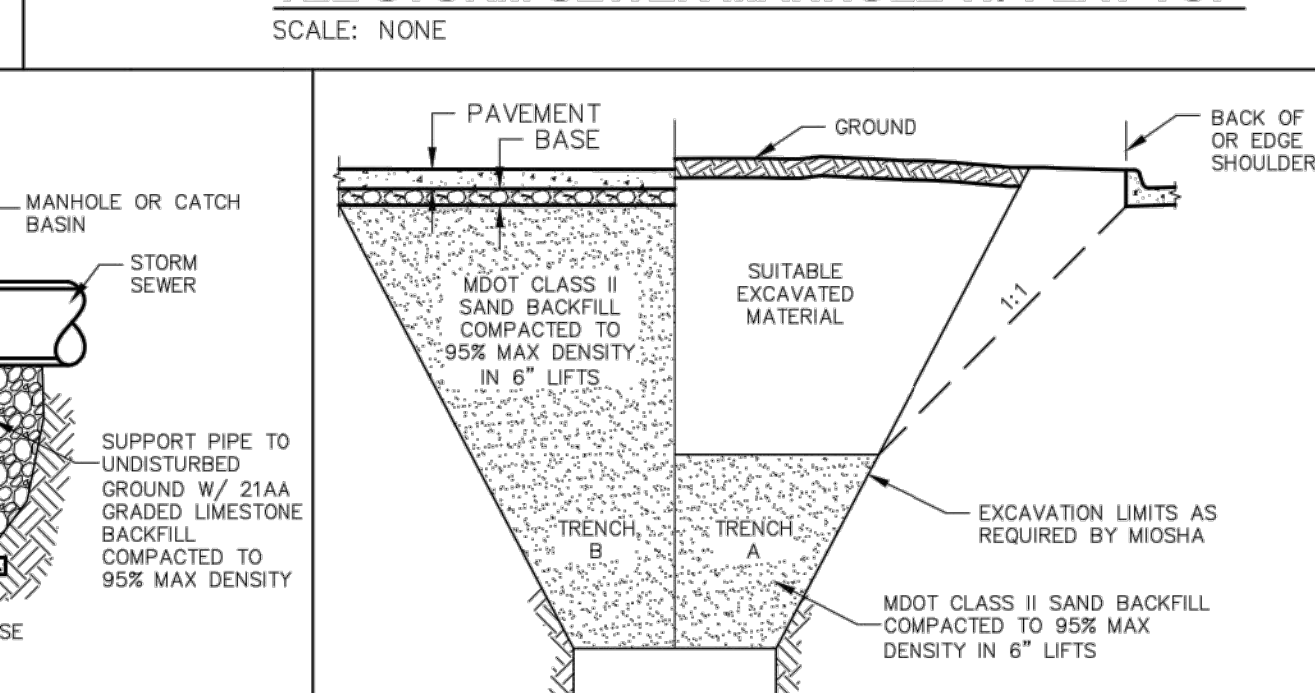
**STORM SEWER MANHOLE W/ FLAT TOP**  
SCALE: NONE

MH I.D. *	PIPE SIZE	TOP SLAB "	REINFORCING STEEL	PRE-CAST WALL THICKNESS	MIN BASE SIZE
48"	36" OR LESS	9"	3/4" @ 9" E.W.	5"	6"
60"	42"	10"	3/4" @ 9" E.W.	6"	7"
72"	48" & 54"	11"	7/8" @ 9" E.W.	7"	8"
84"	60"	12"	1" @ 9" E.W.	8"	9"
96"	72"	12"	1" @ 9" E.W.	9"	10"

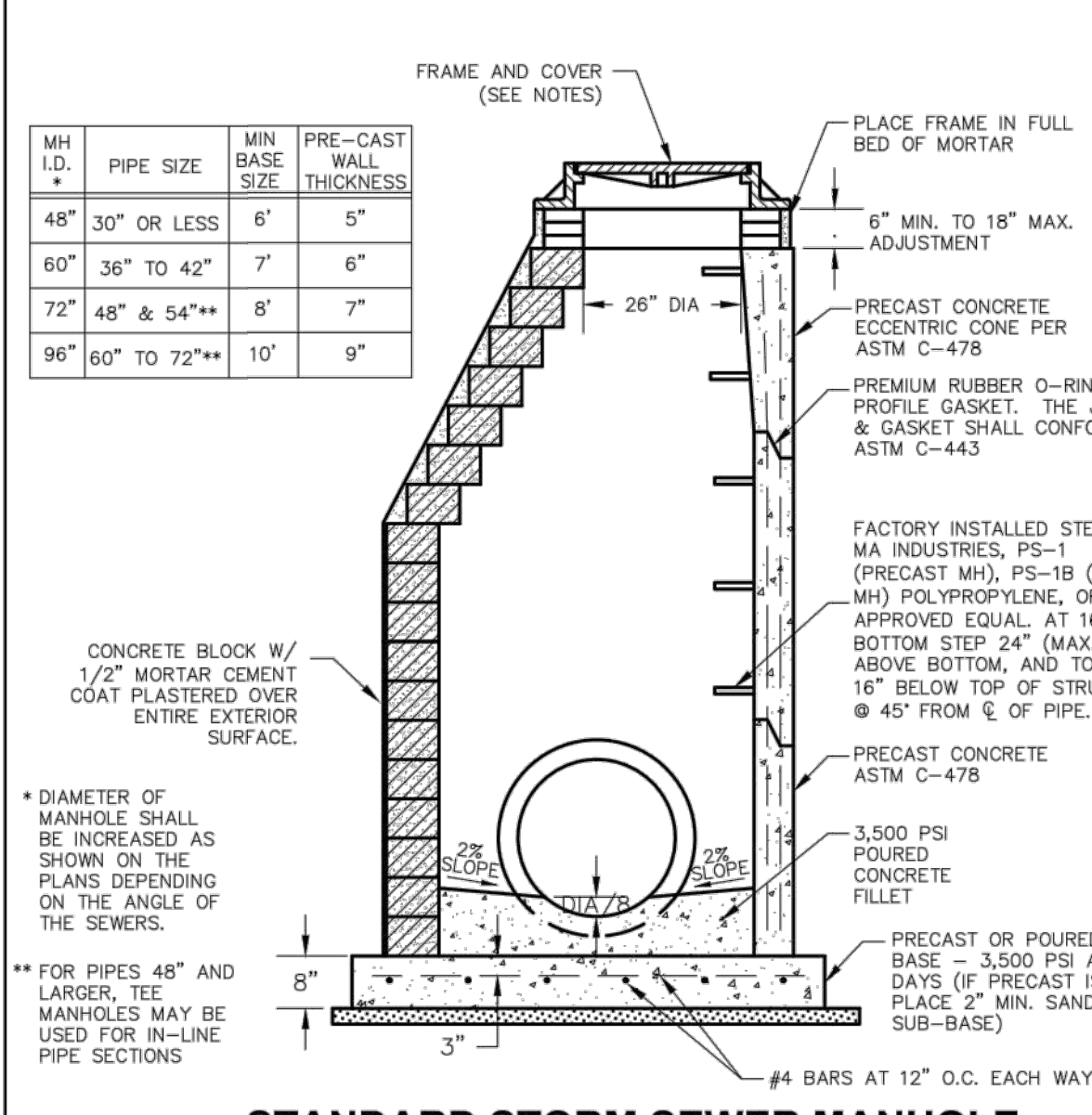
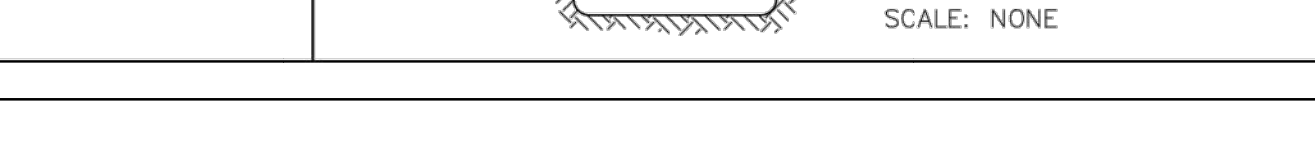
**STORM SEWER MANHOLE W/ FLAT TOP**  
SCALE: NONE



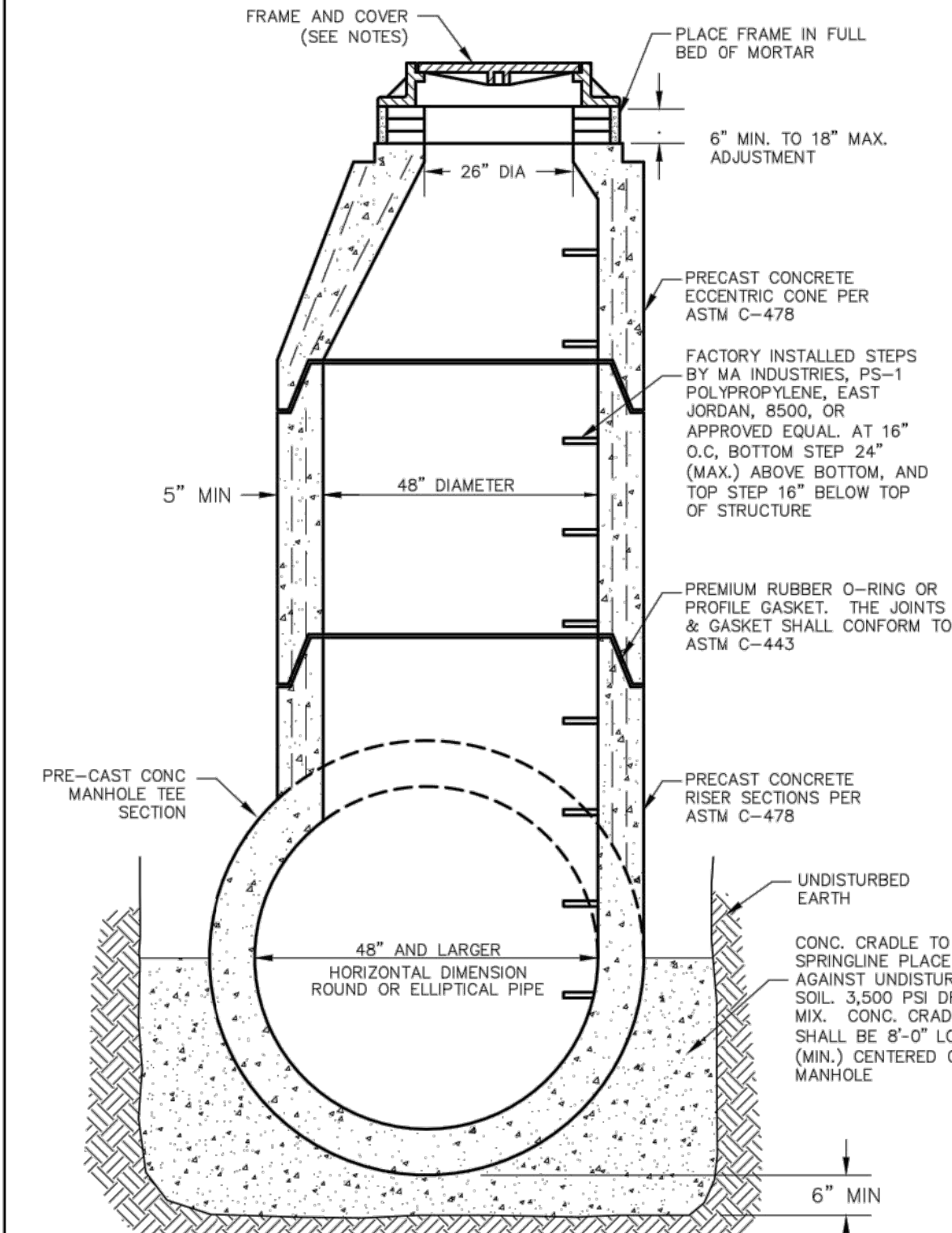
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SCALE: NONE



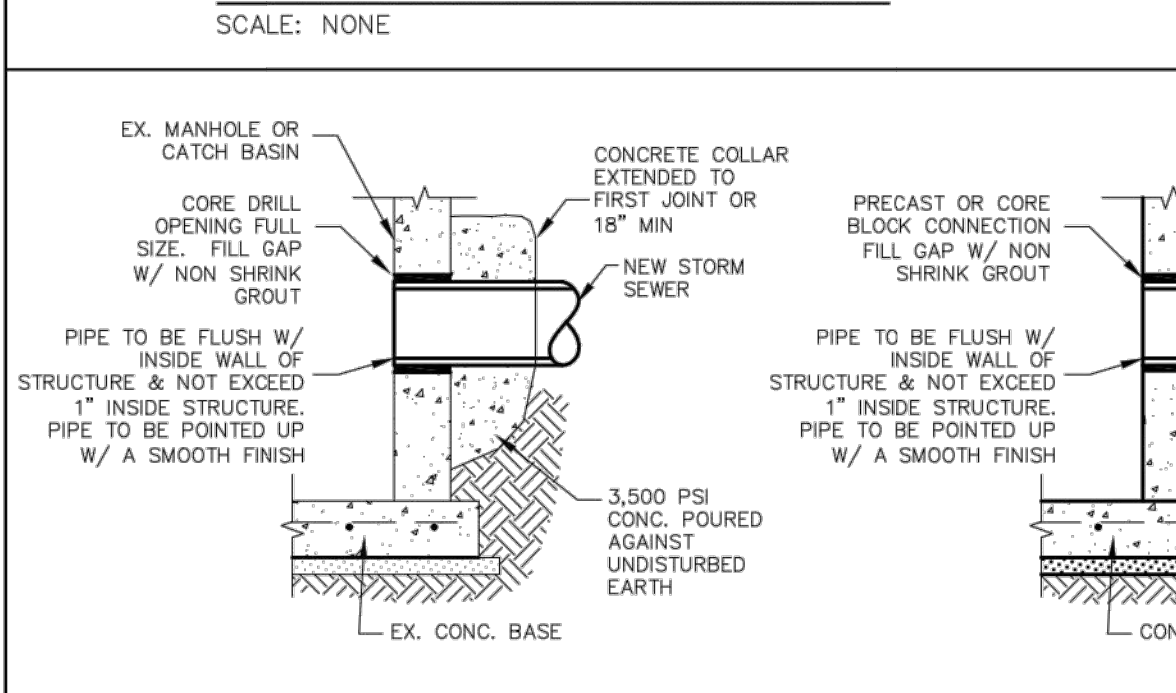
**TRENCH DETAIL**  
SCALE: NONE



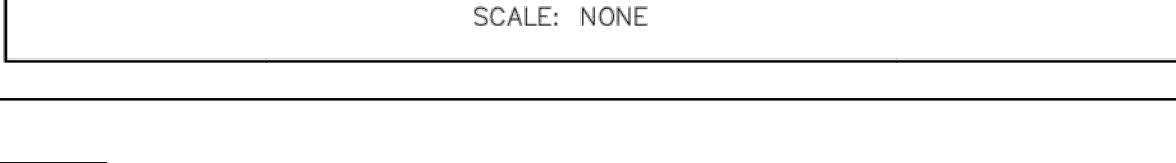
**STANDARD STORM SEWER MANHOLE**  
SCALE: NONE



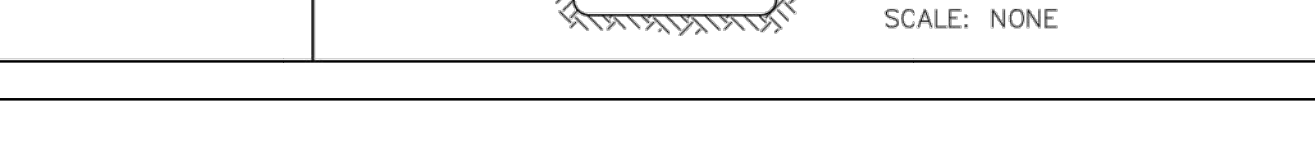
**TEE STORM SEWER MANHOLE**  
SCALE: NONE



**EX. STORM STRUCTURE**  
SCALE: NONE



**PIPE SUPPORT DETAIL**  
SCALE: NONE



MA COMMENTS: MACOMB TOWNSHIP, 54111 BROUGHTON ROAD, MACOMB, MI 48042  
 DATE: 7/17/2017 4:45:53 PM

**PAVING NOTES**

**GENERAL NOTES**

- EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS. TREE ROOTS SHALL BE COMPLETELY REMOVED.
- EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
- THE PAVEMENT SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. THE FINAL SUBGRADE SHALL BE THOROUGHLY PROOF-ROLLED IN THE PRESENCE OF A GEOTECHNICAL/PAVEMENT ENGINEER TO DETERMINE STABILITY. LOOSE OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH CLASS II SAND OR AS DIRECTED BY THE ENGINEER. ALL FILL MATERIAL AND BASE MATERIAL SHALL BE TESTED AND ITS COMPACTION AND SUITABILITY FOR ACCEPTANCE OF THE BASE MATERIAL AND PAVEMENT SHALL BE CERTIFIED BY SAID TESTING FIRM. THE OWNER SHALL SUPPLY THREE COPIES OF GEOTECHNICAL REPORTS TO MACOMB TOWNSHIP.
- IF IN THE OPINION OF THE INSPECTOR/ENGINEER, FIELD CONDITIONS WARRANT ADDITIONAL TESTING, THE DEVELOPER SHALL ARRANGE FOR AND PAY FOR ALL REQUIRED ADDITIONAL TESTING.
- 21AA AGGREGATE BASE SHALL BE COMPACTED TO ACHIEVE A 95% COMPACTION LEVEL (MODIFIED PROCTOR - ASTM D 1557-91) (98% COMPACTION REQUIRED BELOW HMA PAVEMENTS). THE BASE SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE BACK OF CURB OR THE PAVED EDGE.
- CONCRETE AND ASPHALT PAVEMENT TESTING SHALL BE REQUIRED FOR ALL PROJECTS.
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF MACOMB TOWNSHIP, THE MACOMB COUNTY DEPARTMENT OF ROADS (MCDOR), AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.
- 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.
- 1.0 INCH AND 2.0 INCH EXPANSION JOINTS SHALL BE INSTALLED PER MCDOR STANDARDS.
- FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 95% OF THE MAXIMUM DRY DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.
- 6" UNDER DRAIN WRAPPED IN GEOTEXTILE FABRIC FILTER SHALL BE INSTALLED ON BOTH SIDES OF ALL ROADWAYS. ALSO, PLACE UNDER DRAINS AT ALL DRAINAGE STRUCTURES WITHIN PARKING AREAS (SEE UNDERDRAIN DETAILS SHEET 2 OF 2).
- CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW BITUMINOUS PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, SUBJECT TO MACOMB TOWNSHIP AND MCDOR APPROVAL, THE PLACEMENT OF THE FINAL LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED BY THE DEVELOPER. PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS.
- THESE DETAILS ARE SUPPLEMENTAL TO THE MACOMB COUNTY DEPARTMENT OF ROADS (MCDOR) ROAD PAVING STANDARD DETAILS SHEETS 1 & 2.
- ALL ROAD PAVING WITHIN THE TOWNSHIP SHALL COMPLY WITH THE MCDOR PAVING STANDARD DETAILS UNLESS OTHERWISE NOTED ON THE PLANS OR ON THIS SUPPLEMENTAL DETAIL SHEET.
- NO BITUMINOUS PAVEMENT IS PERMITTED FOR ROADS WITHIN PLATTED SUBDIVISIONS OR SITE CONDOMINIUMS (MCDOR PAVING STANDARD DETAILS 1B & 2B).

**CONCRETE PAVEMENT**

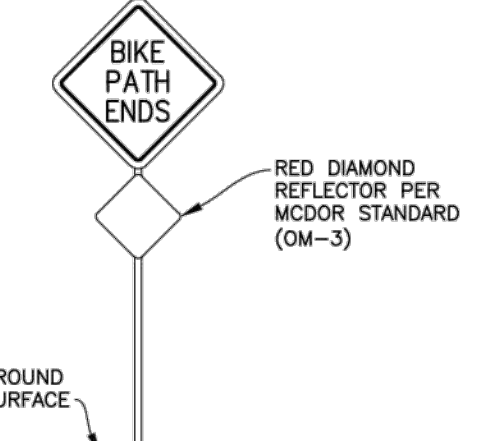
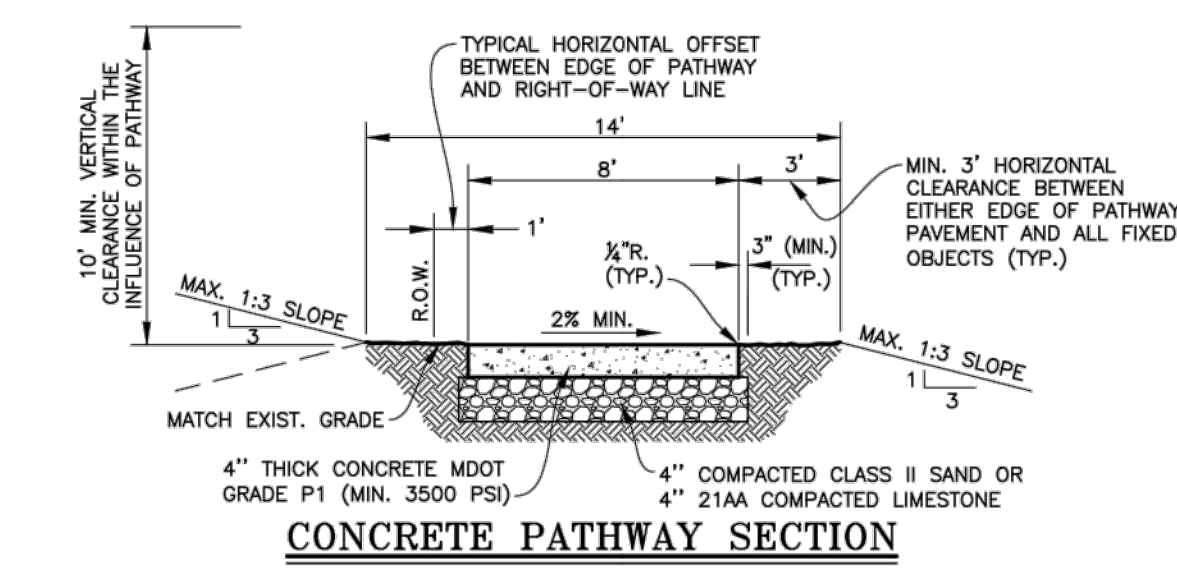
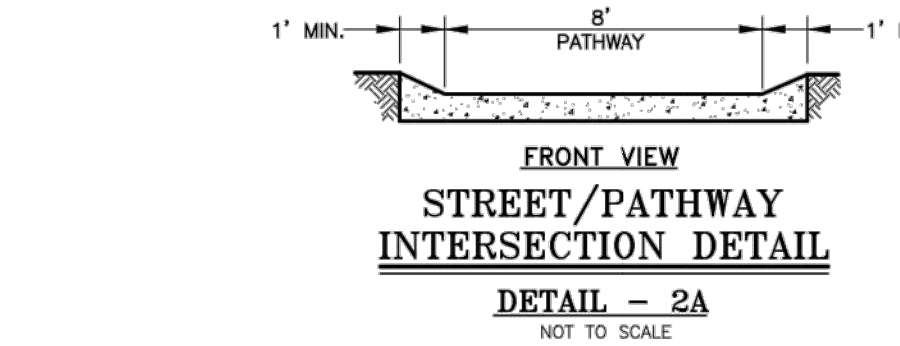
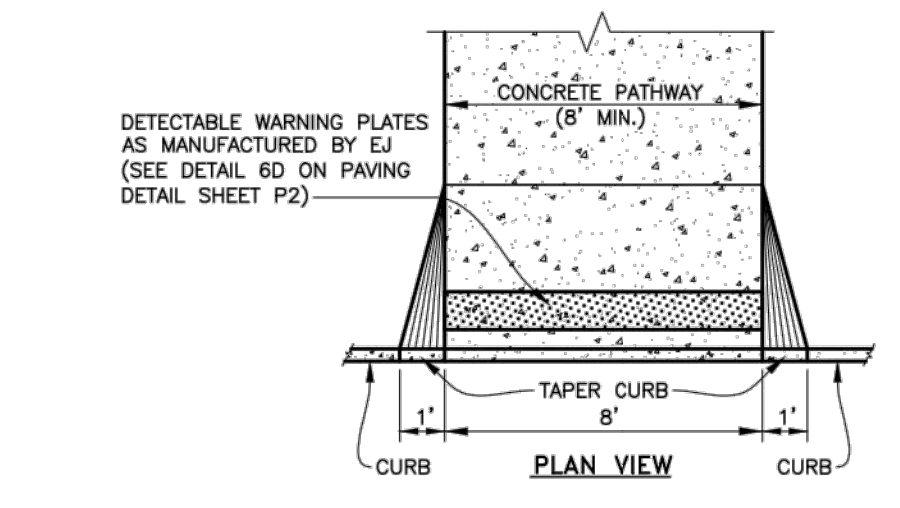
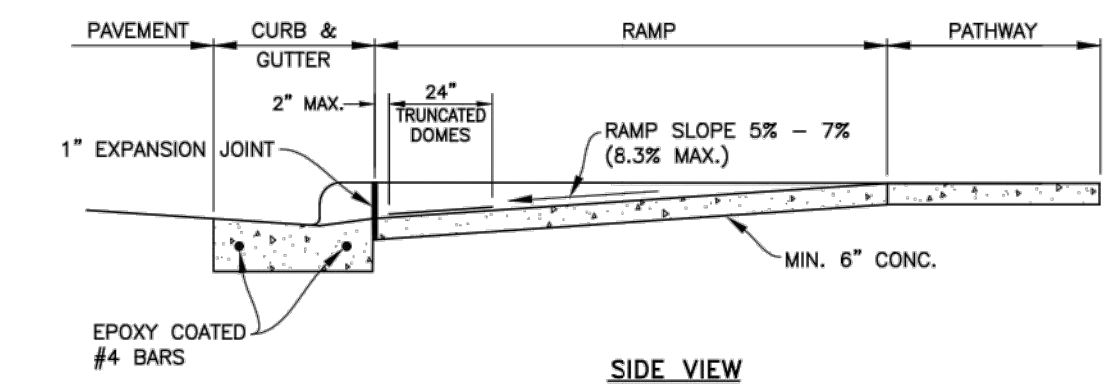
- CONCRETE SHALL CONSIST OF: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MAXIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES. PAVEMENT SHALL CONFORM TO M.D.O.T. GRADE P1. CONCRETE MIXES SHALL BE DESIGNED TO MITIGATE ASR IN ACCORDANCE WITH ASTM 1260, ASTM 1293, OR ASTM 1567.
- ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.
- THE CONCRETE BATCH PLANT SHALL BE M.D.O.T. CERTIFIED WITH LOCATION APPROVED BY THE TOWNSHIP BOARD AND MCDOR.
- NO CONCRETE PAVING SHALL BE ALLOWED PRIOR TO MAY 1, OR AFTER NOVEMBER 1 (UNLESS APPROVED BY MCDOR, MCDOR OR MACOMB TOWNSHIP).
- AIR TEMPERATURE AT POINT OF PLACEMENT, AWAY FROM ARTIFICIAL HEAT SHALL BE MINIMUM 25° F AND RISING.
- TEMPERATURE OF CONCRETE AT TIME OF PLACEMENT SHALL BE BETWEEN 45° F AND 90° F.

**BITUMINOUS PAVEMENT**

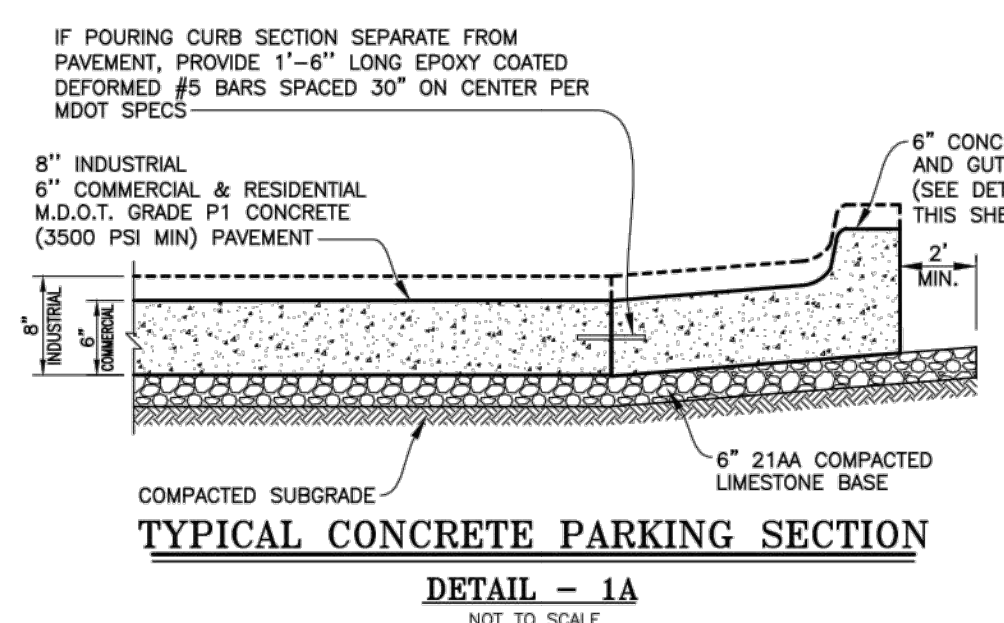
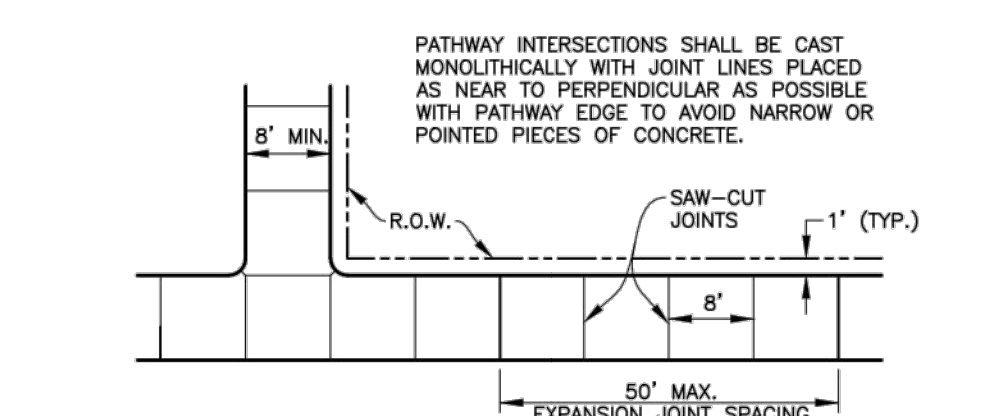
- BITUMINOUS MIXTURE FOR INDUSTRIAL PARKING LOTS SHALL CONSIST OF: BASE COURSE - MDOT BITUMINOUS MIXTURE NO. 2C; LEVELING COURSE - MDOT BITUMINOUS MIXTURE NO. 3C OR 4E1; WEARING COURSE - MDOT BITUMINOUS MIXTURE NO. 4C OR 5E1; ASPHALT PERFORMANCE GRADE PG 64-22 RECLAIMED ASPHALT PAVEMENT (RAP) SHALL NOT BE ALLOWED IN THE TOP COURSE.
- FOR PRIVATE RESIDENTIAL ROADWAYS MDOT BITUMINOUS MIXTURE 5E1/4E1, AND/OR 36A/13A MAY BE USED, WITH APPROVAL FROM THE TOWNSHIP ENGINEER.
- ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY OF 97% OF THE FIELD CONTROL DENSITY AS DETERMINED BY THE MARSHALL METHOD.
- A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN THE BASE COURSE AND LEVELING COURSE AND BETWEEN THE LEVELING COURSE AND WEARING COURSE. IN EITHER CASE, HMA OR POLYMER MODIFIED BITUMINOUS MIXTURE SHALL BE USED. IF THE SURFACE OF THE PAVEMENT HAS BEEN CONTAMINATED WITH DIRT, DUST, OR FOREIGN MATERIAL, THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.10 GALLON/5Y. (BETWEEN LEVELING COURSE AND BASE COURSE & 0.05 GALLON/5Y BETWEEN WEARING COURSE AND LEVELING COURSE) THE COATS MAY DIFFER, IN THE EVENT A BOND COAT IS NOT REQUIRED, THE LEVELING COURSE MAY REQUIRE LOCALIZED BROOM CLEANING.
- DO NOT PLACE HMA OR APPLY BOND COAT WHEN PRECIPITATION IS IMMINENT OR WHEN MOISTURE ON THE EXISTING SURFACE WILL PREVENT SATISFACTORY CURING. UNLESS OTHERWISE APPROVED BY THE ENGINEER IN WRITING, TEMPERATURE AND SEASONAL REQUIREMENTS FOR PLACING HMA WILL BE ACCORDING TO SECTION 5.01.03.1 OF THE CURRENT MCDOR SPECIFICATIONS. PAVING WILL NOT BE ALLOWED BELOW THESE MINIMUM TEMPERATURES, NOR WHEN FROST IS ON OR IN THE GRADE OR ON THE EXISTING SURFACE.

**CONCRETE PATHWAY NOTES**

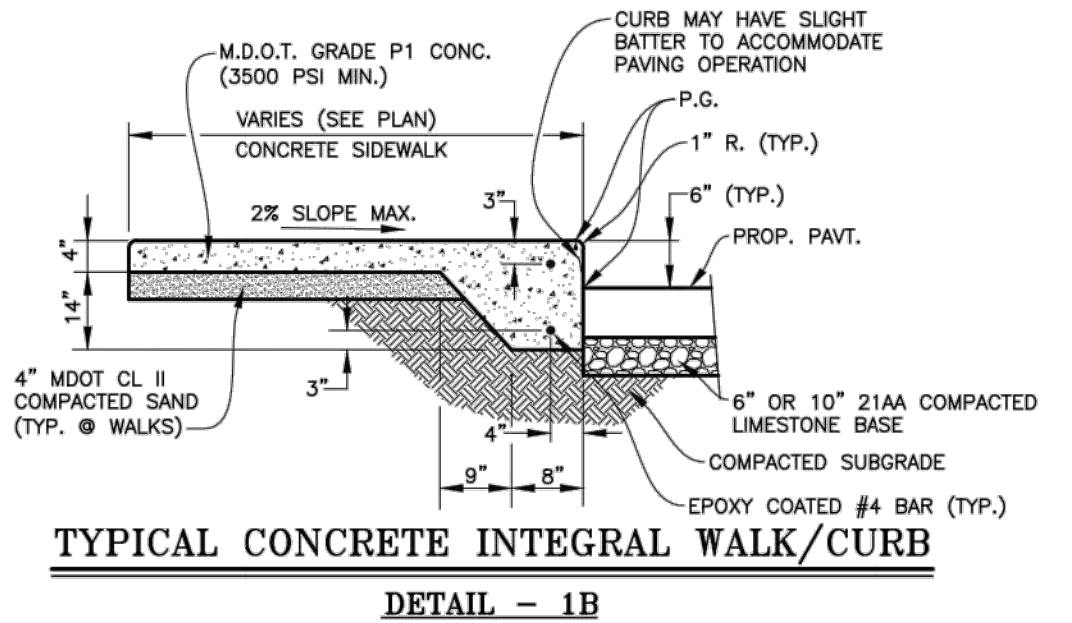
- FOR CONCRETE PATHWAY PROVIDE TRANSVERSE PLANE OF WEAKNESS SAW CUT JOINTS AT APPROXIMATELY 8' INTERVALS. SAW 3/4" WIDE x 1" DEEP JOINTS AND DO NOT SEAL THE JOINTS. TOOLED JOINTS ARE NOT ACCEPTABLE.
- PROVIDE FULL DEPTH TRANSVERSE EXPANSION JOINTS, BY INSTALLING 1/2" THICK PREMOLDED JOINT FILLER SET 1/4" BELOW THE SURFACE OF THE CONCRETE IN THE JOINTS AT 50' INTERVALS (MAX.).
- PLACE 1/2" FIBER EXPANSION JOINT FILLERS AT EACH SIDE OF DRIVE.
- PROVIDE 1" FIBER EXPANSION JOINT FILLERS AT CURB AND BUILDING OR R.O.W. LINE.
- AT DRIVEWAYS WITH CURB & GUTTER, PROVIDE CURB DROP PER MCDOR STANDARDS.
- AT UNPAVED DRIVE OR PAVED DRIVE WITH POOR CONDITION, INCREASE THE SLAB THICKNESS TO 6" OR EXISTING SLAB THICKNESS WHICHEVER IS GREATER.
- PROVIDE 10' BETWEEN EDGE OF PATHWAY TO TOP OF BANK FOR DETENTION BASINS, OPEN DRAINS, ETC.
- ADJACENT FINISHED GRADE SHALL BE SET 2" BELOW TO ACCOMMODATE SOD.
- THE MAXIMUM GRADE ALONG PATHWAY SHALL NOT EXCEED 1 ON 12.
- PROVIDE 2% MAXIMUM CROSS SLOPE FOR DRAINAGE OFF AND AWAY FROM PATHWAY AND GRADED SHOULDERS.
- PROVIDE 95' MINIMUM CENTER LINE RADI FOR PATHWAY HORIZONTAL ALIGNMENT.
- PROVIDE A MINIMUM OF 3' HORIZONTAL CLEARANCE AND 10' VERTICAL CLEARANCE FROM ALL FIXED OBJECTS AND THE EDGE OF PATHWAY SURFACE. RELOCATE EXISTING OBJECTS (I.E. MAIL BOXES, SIGNS, ETC.), IF REQUIRED.
- PROVIDE HANDICAP ACCESSIBLE RAMP AT EXISTING PAVED DRIVEWAYS IN GOOD CONDITION AND AT STREET INTERSECTIONS.
- PATHWAY RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MCDOR STANDARDS AND SHALL BE A MINIMUM OF 8" WIDE.
- A CLEAN SAW CUT JOINT SHALL BE PROVIDED WHEREVER NEW PAVEMENT MATCHES EXISTING PAVEMENT.
- UTILITY STRUCTURES SHALL BE ADJUSTED IN ACCORDANCE WITH MACOMB TOWNSHIP STANDARDS AND SHALL MATCH THE PROPOSED GRADE OF THE PATHWAY.



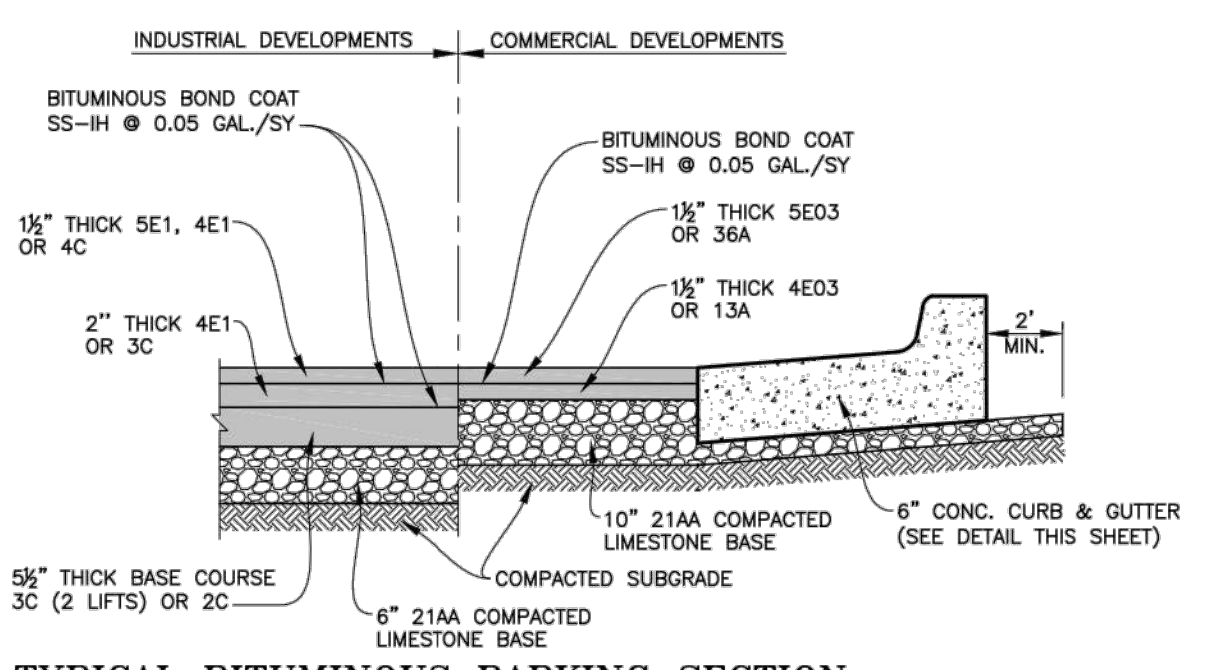
- NOTES:**
- SIGNS SHALL BE 18"x18" AND CONSTRUCTED OF 0.63 ENGINEERING GRADE REFLECTIVE ALUMINUM WITH 1/2" RADIUS AT CORNERS.
  - SIGNS SHALL HAVE A YELLOW BACKGROUND WITH BLACK COPY AND BLACK OUTLINE.
  - SIGN POST AND FASTENERS SHALL BE LOCATED PER M.M.U.T.C.D. (MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.



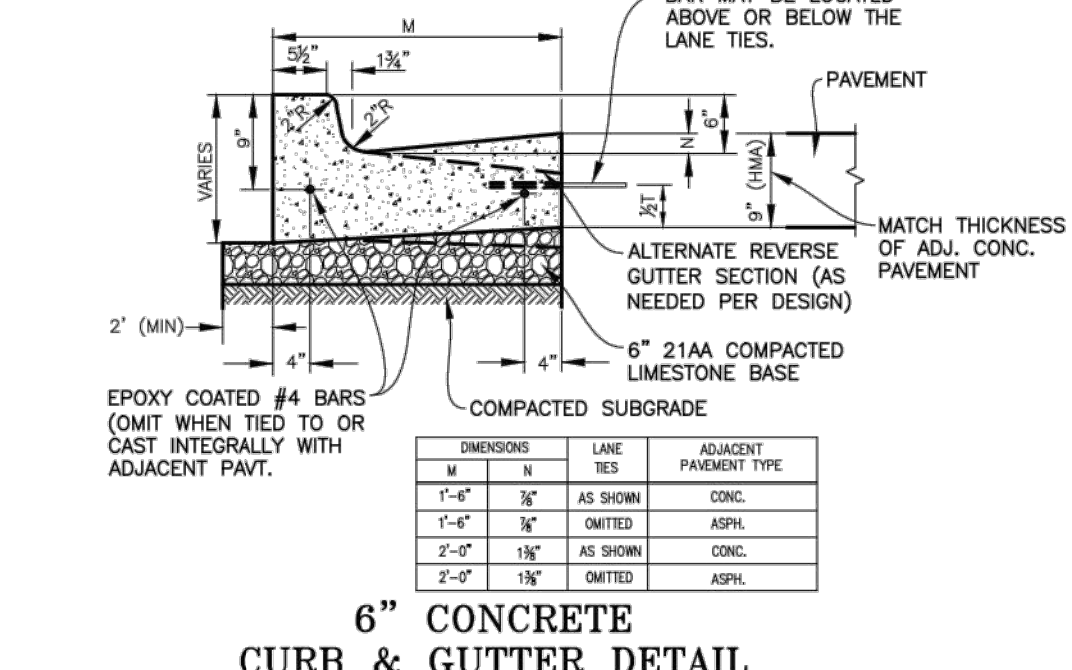
**TYPICAL CONCRETE PARKING SECTION**  
DETAIL - 1A  
NOT TO SCALE



**TYPICAL CONCRETE INTEGRAL WALK/CURB**  
DETAIL - 1B  
NOT TO SCALE



**TYPICAL BITUMINOUS PARKING SECTION**  
DETAIL - 1C  
NOT TO SCALE



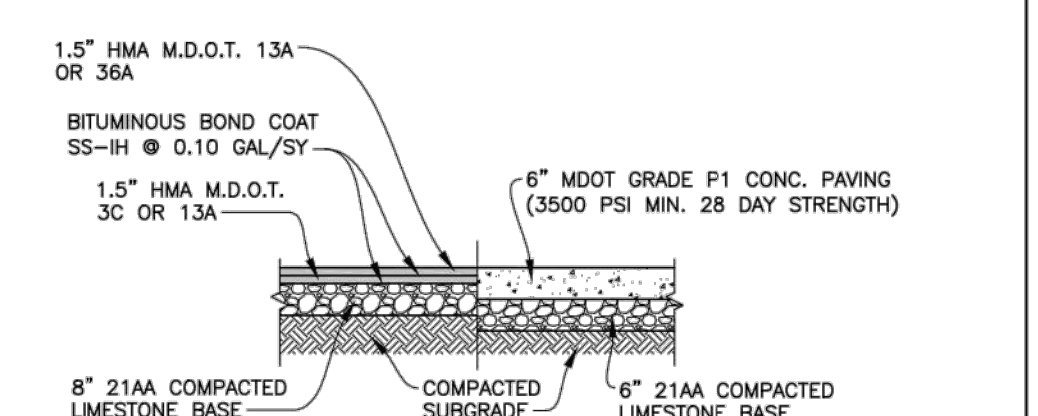
**6" CONCRETE CURB & GUTTER DETAIL**  
(FOR RESIDENTIAL, COMMERCIAL & INDUSTRIAL PARKING AREAS)  
DETAIL - 1D  
NOT TO SCALE



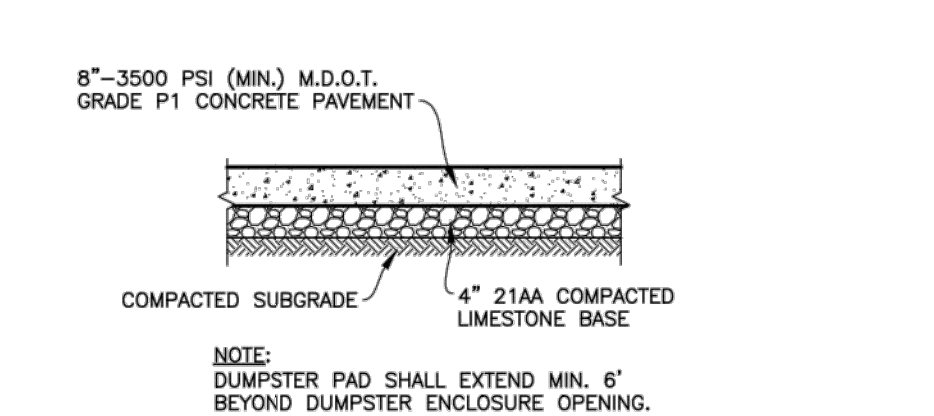
**CONCRETE PATHWAY SIGNAGE**  
DETAIL - 2C  
NOT TO SCALE



**TYPICAL CONCRETE PATHWAY JOINT LAYOUTS**  
DETAIL - 2D  
NOT TO SCALE



**16' WIDE MAINTENANCE DRIVEWAY DETAIL - 3**  
NOT TO SCALE



**8" CONCRETE DUMPSTER PAD DETAIL - 4**  
NOT TO SCALE



**MACOMB TOWNSHIP**  
54111 BROUGHTON ROAD  
MACOMB, MI 48042  
586-992-0710

**3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171**  
For the location of public utility lines

NOTE: UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANIES, CITY/COUNTY AGENCIES AND OTHER VARIOUS SOURCES. UNDERGROUND UTILITIES WHICH ARE ON PRIVATE PROPERTY ARE USUALLY NOT DELINEATED UPON A UTILITY COMPANY'S PUBLISHED PLANS. THEIR LOCATION, IF SHOWN UPON THIS SURVEY, ARE APPROXIMATED FROM FOUND PAINT MARKS/STAKES, ETC. AS LOCATED BY THIS FIRM FROM SOURCES WHICH ARE UNKNOWN. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

**TOWNSHIP OF MACOMB**

**PAVING STANDARD DETAILS (1 OF 2)**

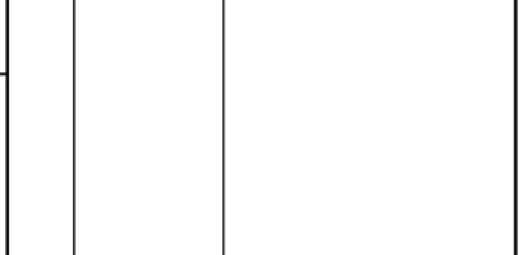
TOWN 3 NORTH RANGE 13 EAST  
MACOMB TOWNSHIP  
MACOMB COUNTY

NO.	DATE	REVISION
1	10-15-14	SHEET UPDATE
2	11-06-15	SHEET UPDATE
3	03-28-16	SHEET UPDATE
4	10-14-16	SHEET UPDATE
5	01-24-17	SHEET UPDATE
6	08-20-18	SHEET UPDATE

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
SHEET UPDATE: END, MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

**TACO BELL**  
17669 23 Mile Road  
Macomb, MI 48042



**ENDEAVOR 2.0 TOWNSHIP PAVING DETAILS**

**C-506**

PLOT DATE:

FOR REFERENCE ONLY

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
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**TACO BELL**  
17669 23 Mile Road  
Macomb, MI 48042



**ENDEAVOR 2.0 TOWNSHIP PAVING DETAILS**

**C-506**

PLOT DATE:



**MACOMB TOWNSHIP**  
54111 BROUGHTON ROAD  
MACOMB, MI 48042

586-992-0710



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**TOWNSHIP OF  
MACOMB**

PAVING STANDARD DETAILS  
(2 OF 2)

TOWN 3 NORTH RANGE 13 EAST  
MACOMB TOWNSHIP  
MACOMB COUNTY

NO. DATE REVISION

NO.	DATE	REVISION
1	10-15-14	SHEET UPDATE
2	11-06-15	SHEET UPDATE
3	01-04-16	SIDEWALK RAMP THICKNESS
4	01-24-17	SHEET UPDATE
5	08-20-18	SHEET UPDATE
6	09-26-19	TEMP. T-TURNAROUND

DATE	REMARKS
1	3/8/22 Planning Comments
2	3/21/22 Planning Comments
3	4/21/22 Issued for Permit
4	6/30/22 Macomb SESC Comments
5	7/29/22 Macomb Township Comments

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

**TACO BELL**

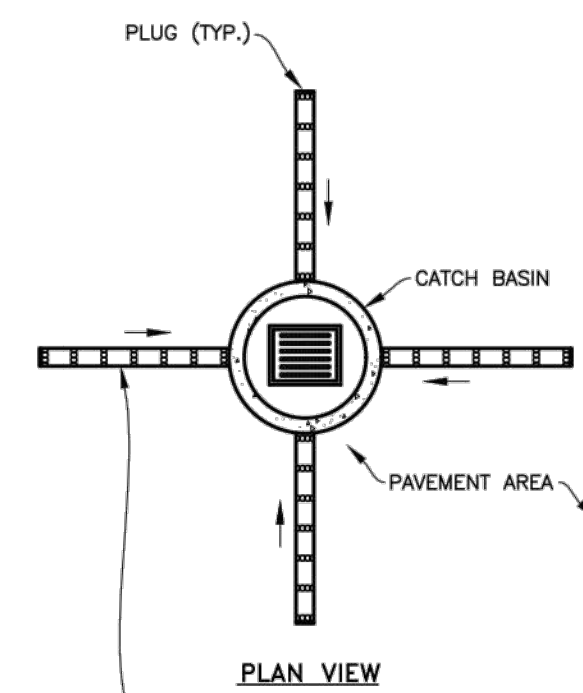
17669 23 Mile Road  
Macomb, MI 48042



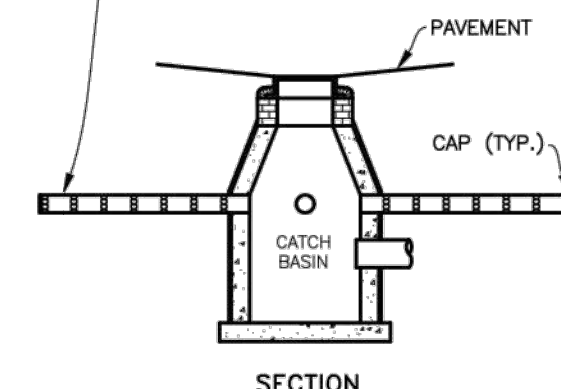
ENDEAVOR 2.0  
TOWNSHIP  
PAVING  
DETAILS

**C-507**

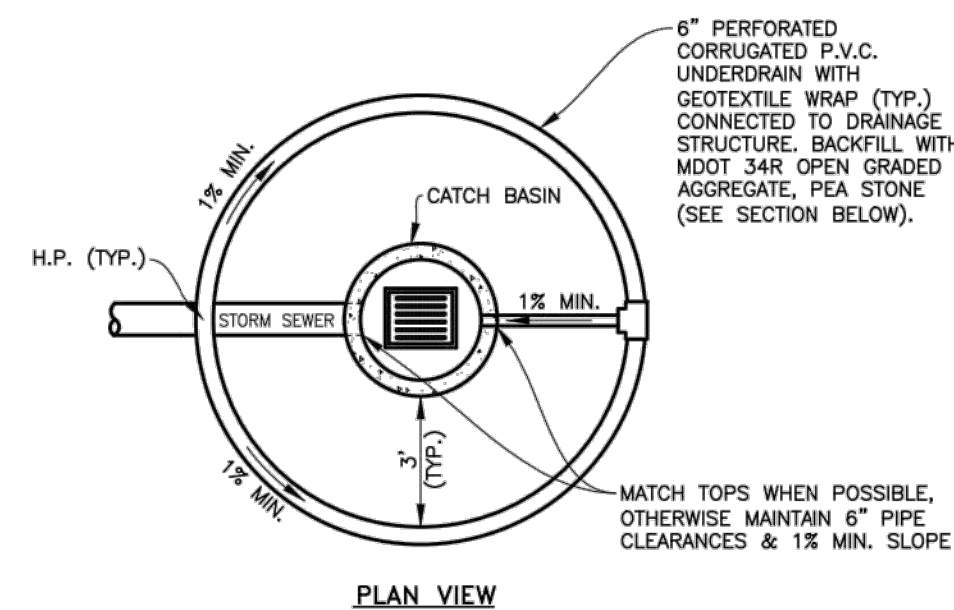
PLOT DATE:



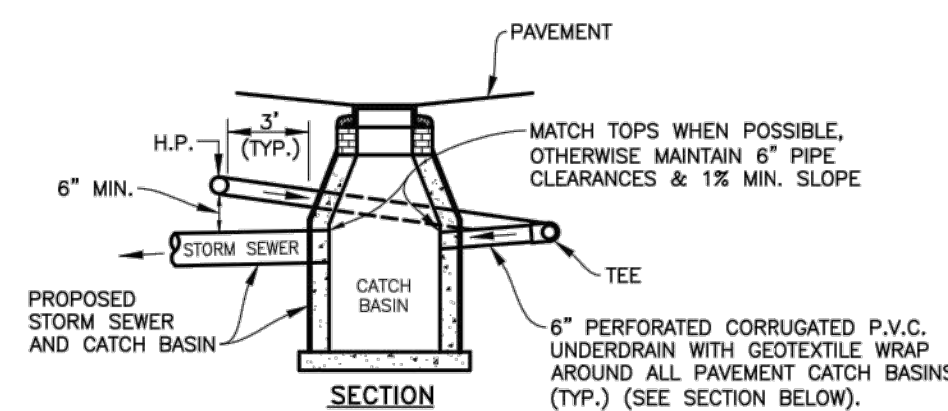
10 LF. OF 6" PERFORATED CORRUGATED P.V.C. UNDERDRAIN WITH GEOTEXTILE WRAP (TYP.) CONNECTED TO DRAINAGE STRUCTURE. BACKFILL WITH MDOT 34R OPEN GRADED AGGREGATE, PEA STONE (SEE DETAIL BELOW).



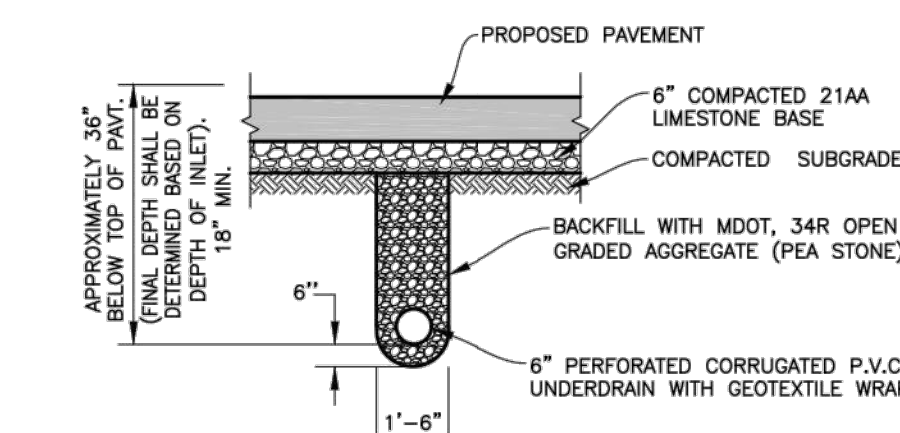
**TYPICAL 6" FINGER TYPE  
UNDERDRAIN DETAIL**  
(WITHIN PARKING LOTS OUTSIDE CURB LINES)  
**DETAIL - 5A**  
NOT TO SCALE



MATCH TOPS WHEN POSSIBLE, OTHERWISE MAINTAIN 6" PIPE CLEARANCES & 1% MIN. SLOPE



**TYPICAL 6" CIRCULAR  
UNDERDRAIN DETAIL**  
(WITHIN PARKING LOTS OUTSIDE CURB LINES)  
**DETAIL - 5B**  
NOT TO SCALE

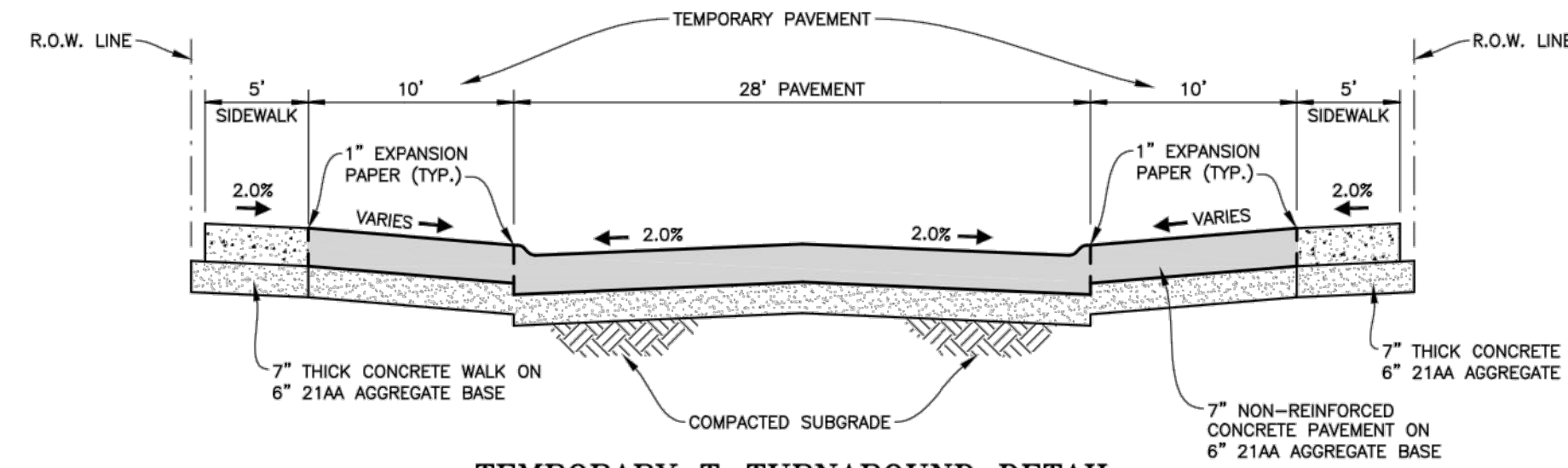


**UNDERDRAIN DETAIL**  
**DETAIL - 5C**  
NOT TO SCALE

**UNDERDRAIN NOTES**

1. UNDERDRAIN TO BE 6" PVC AASHTO M 252 SDR-35 WITH PERFORATIONS MEETING AASHTO M 278 OR M 252.
2. ALL UNDERDRAIN SHALL BE INSTALLED AT A MIN. SLOPE OF 1%.
3. PIPE SHALL BE INSTALLED WITH THE PERFORATIONS PLACED DOWN.
4. PROPOSED UNDERDRAIN PIPE LAYOUT, FLOW LINE ELEVATION AND DETAILS SHALL BE APPROVED PRIOR TO CONSTRUCTION.

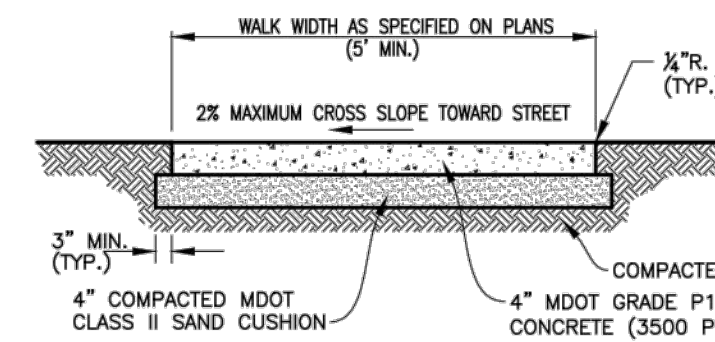
**TYPICAL UNDERDRAIN DETAILS - 5**



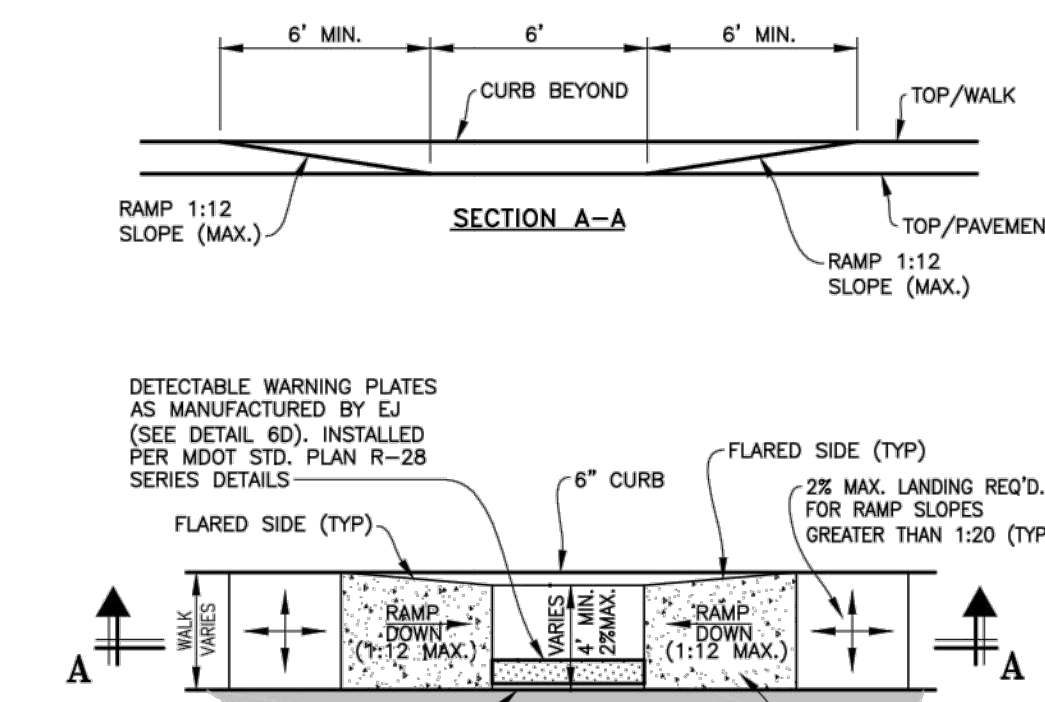
**TEMPORARY T-TURNAROUND DETAIL**  
NOT TO SCALE

**TEMPORARY T-TURNAROUND NOTES**

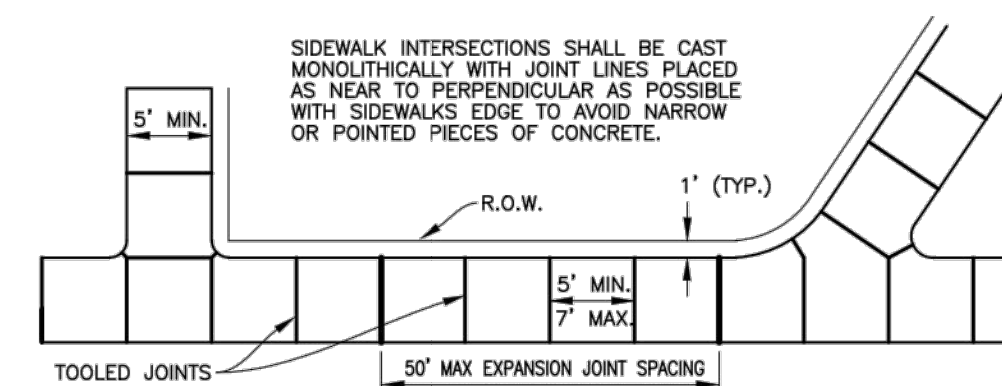
1. PROVIDE TEMPORARY T-TURNAROUND PER FIGURE 2-02 OF THE MACOMB COUNTY SUBDIVISION DEVELOPMENT PROCEDURES, STANDARDS AND SPECIFICATIONS.
2. CONSTRUCT TEMPORARY T-TURNAROUND CROSS SECTION PER THE DETAIL TO THE LEFT.
3. PROVIDE THE STANDARD "ROAD ENDS" TREATMENTS PER FIGURE 4-13 OF THE MACOMB COUNTY SUBDIVISION DEVELOPMENT PROCEDURES, STANDARDS AND SPECIFICATIONS.



**TYPICAL CROSS SECTION  
4" CONCRETE SIDEWALK**  
**DETAIL - 6A**  
NOT TO SCALE



**TYPICAL PARKING LOT SIDEWALK RAMP DETAIL**  
**DETAIL - 6B**  
NOT TO SCALE

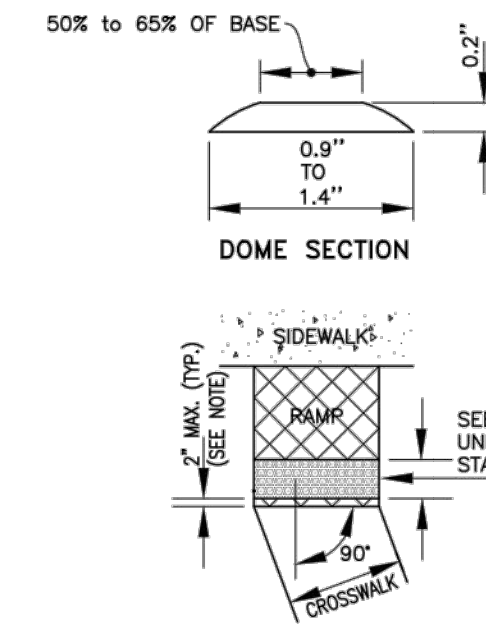


**TYPICAL SIDEWALK JOINT LAYOUTS**  
**DETAIL - 6C**  
NOT TO SCALE

**SIDEWALK JOINTS NOTES**

1. CONSTRUCT TRANSVERSE AND LONGITUDINAL EXPANSION AND PLANE OF WEARNESS JOINTS AT INTERVALS AND LOCATIONS SHOWN ON THE PLANS. ALIGN TRANSVERSE JOINTS WITH JOINTS IN ANY ADJACENT SLAB.
2. CONSTRUCT JOINTS WITH FACES PERPENDICULAR TO THE SIDEWALK SURFACE.
3. PLACE CONTRACTION JOINTS AT 5' MINIMUM AND 7' MAXIMUM INTERVALS. JOINTS ARE TO BE FULL WIDTH OF THE WALK AND MINIMUM 1/4" SLAB THICKNESS DEEP AND 1/8" HIGH TO 1/4" HIGH WIDE.
4. PLACE 1" FIBER EXPANSION JOINT FILLERS AT MAX. 50' INTERVALS. EXTEND EXPANSION JOINT FILLER THE FULL DEPTH OF THE JOINT WITH THE TOP SLIGHTLY BELOW THE FINISHED SURFACE OF THE SIDEWALK.
5. PLACE 1" FIBER EXPANSION JOINT FILLERS AT EACH SIDE OF DRIVE.
6. PROVIDE 1" FIBER EXPANSION JOINT FILLERS AT CURB AND BUILDING OR R.O.W. LINE.

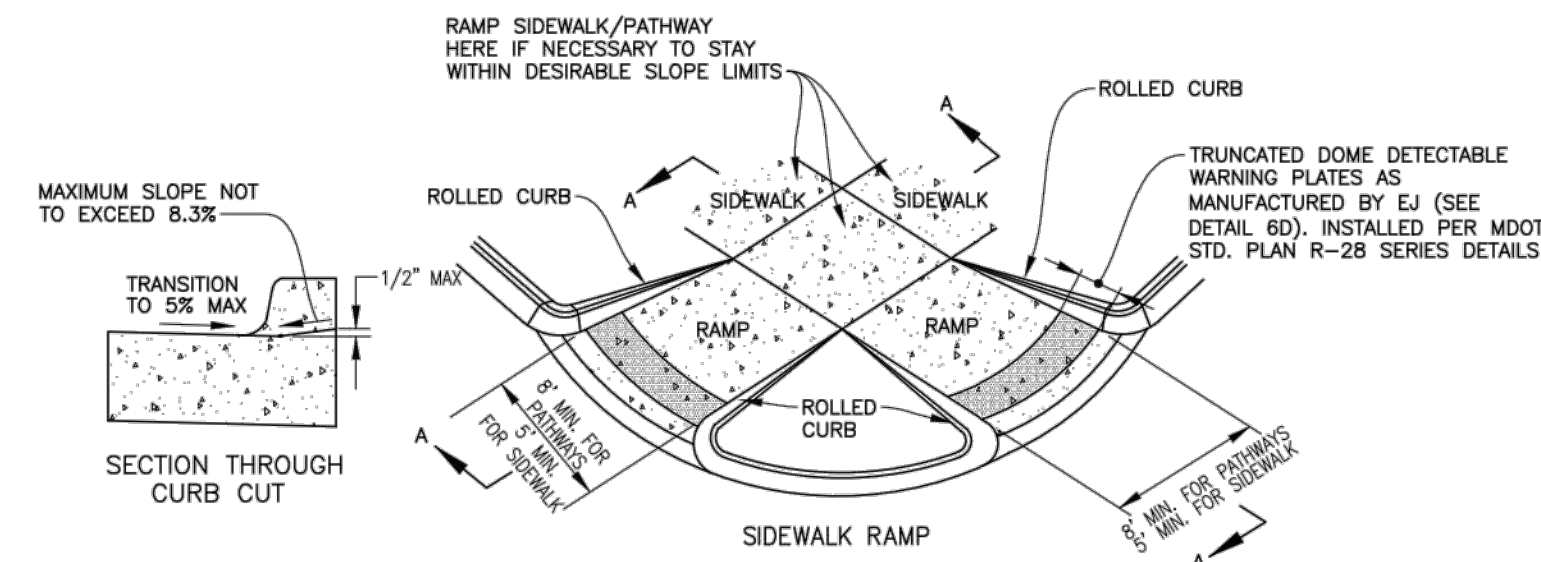
**TYPICAL CONCRETE SIDEWALK DETAILS - 6**



THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL (PERPENDICULAR SHOWN) TO THE GRADE BREAK BETWEEN THE RAMP, LANDING, OR BLENDED TRANSITION AND THE STREET.

NOTE: DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 2" MAX. FROM THE BACK OF CURB. THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK BETWEEN THE RAMP, LANDING, OR BLENDED TRANSITION AND THE STREET.

**DETECTABLE WARNING DETAILS**  
**M.D.O.T. STANDARD PLAN R-28 SERIES**  
**DETAIL - 6D**  
NOT TO SCALE



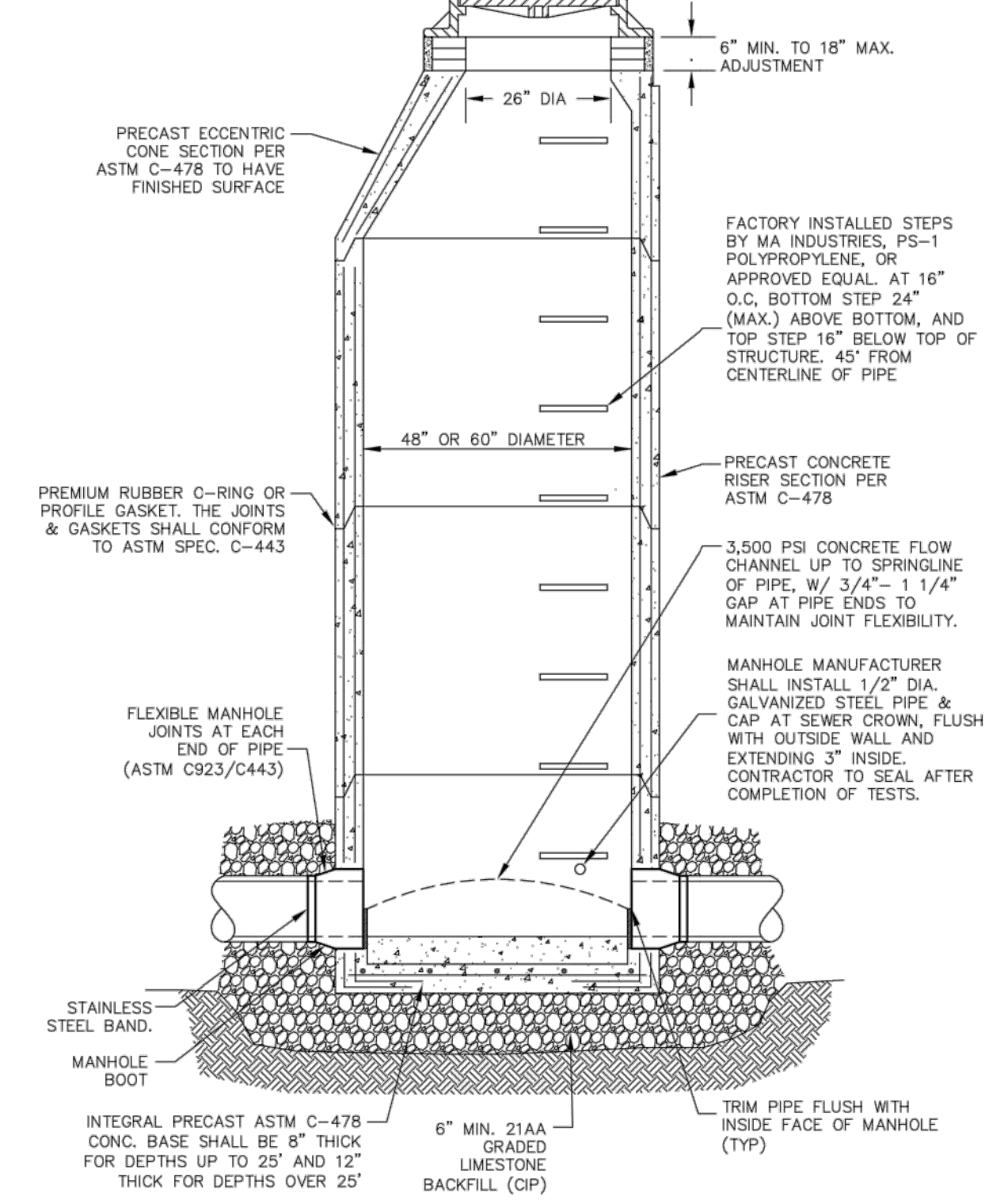
**TYPICAL SIDEWALK RAMP DETAILS AT ROAD INTERSECTION**  
**M.D.O.T. TYPE 4**  
**STANDARD PLAN R-28 SERIES**  
**DETAIL - 6E**  
NOT TO SCALE

**SIDEWALK STANDARD NOTES**

1. SIDEWALK RAMP, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN ON THE PLAN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.
2. SIDEWALK AND PATHWAY RAMP ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. DETAILS 6C, 6D, & 6E SHOW SIDEWALK RAMP DETAILS AT PARKING LOT AND ROADWAY INTERSECTION. HANDICAP RAMP SHALL MEET A.D.A. BARRIER FREE REQUIREMENTS.
3. RAMP SHALL BE PROVIDED AT CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB.
4. SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE SLOPE OF RAMP.
5. SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.
6. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND SHORT GRADE CHANGES. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.
7. IF POSSIBLE, DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMP. EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION, LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE.
8. THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGHOUT THE AREA OF THE RAMP.
9. THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.
10. CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
11. DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED AND INSTALLED AS INDICATED ON MDOT STANDARD PLAN R-28 SERIES DETAILS.

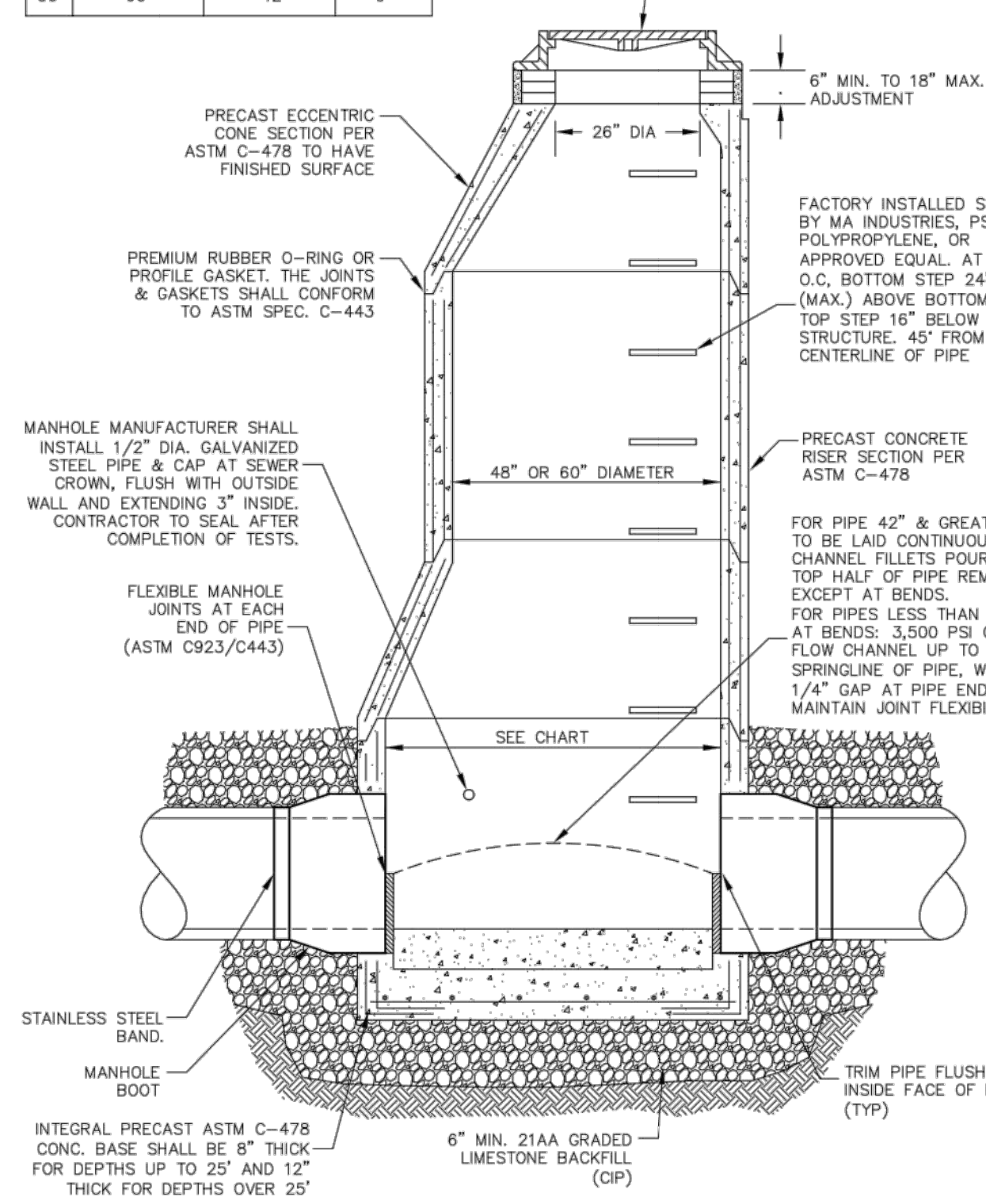
VERIFY SCALES	
BAR IS ONE INCH ON ORIGINAL DRAWING	
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	
JOB NO.	DRAWING NO.
SCALE:	MA-DET-PAV
N.T.S.	P2

MH I.D.	MAX STRAIGHT THRU PIPE SIZE	MAX RIGHT ANGLE PIPE SIZE	MIN WALL THICKNESS
48"	24"	18"	5"
60"	36"	24"	6"

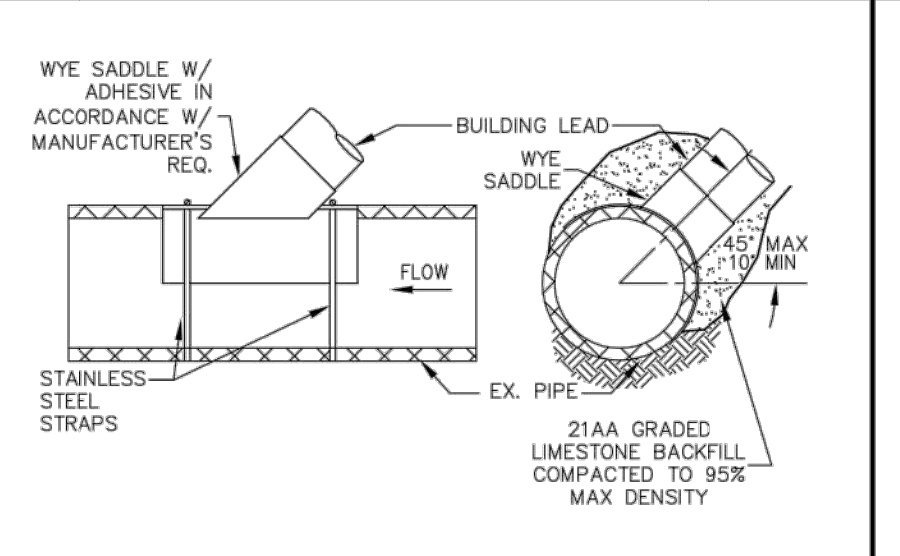


**STANDARD SANITARY SEWER MANHOLE**  
SCALE: NONE

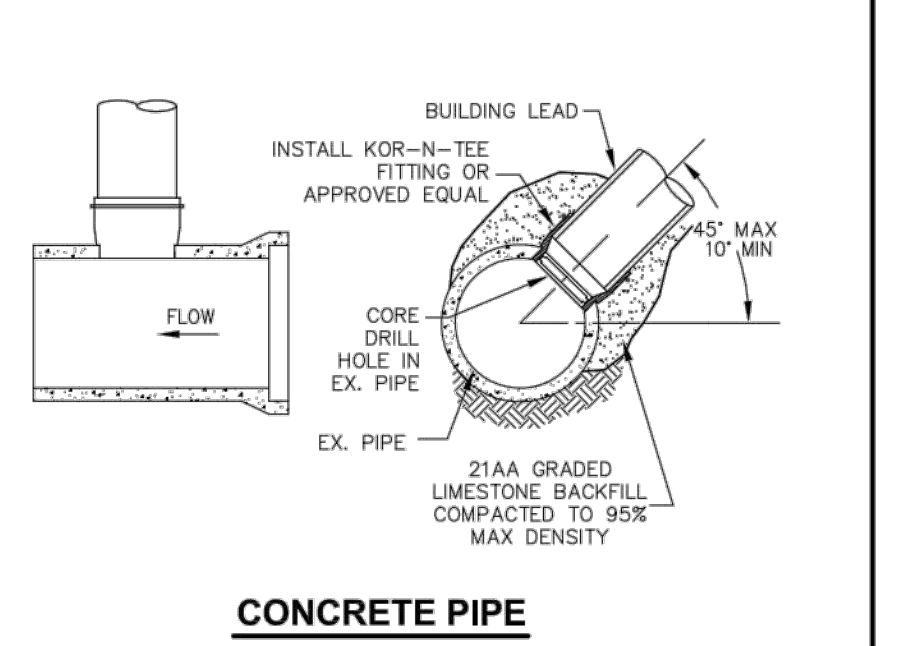
MH I.D.	MAX STRAIGHT THRU PIPE SIZE	MAX RIGHT ANGLE PIPE SIZE	MIN WALL THICKNESS
60"	36"	24"	6"
72"	42"	36"	7"
96"	60"	42"	9"



**LARGE SANITARY SEWER MANHOLE**  
SCALE: NONE

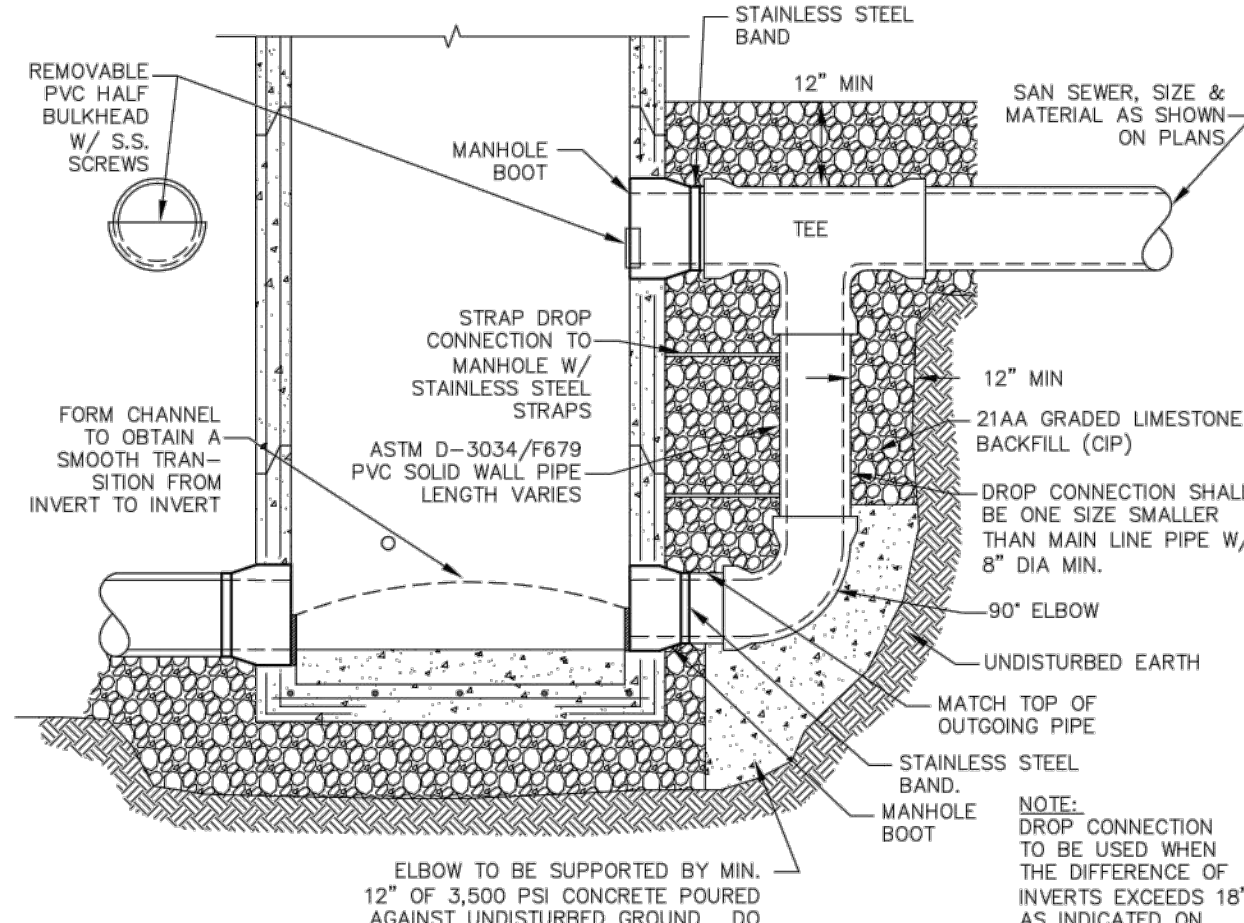


**TRUSS PIPE**

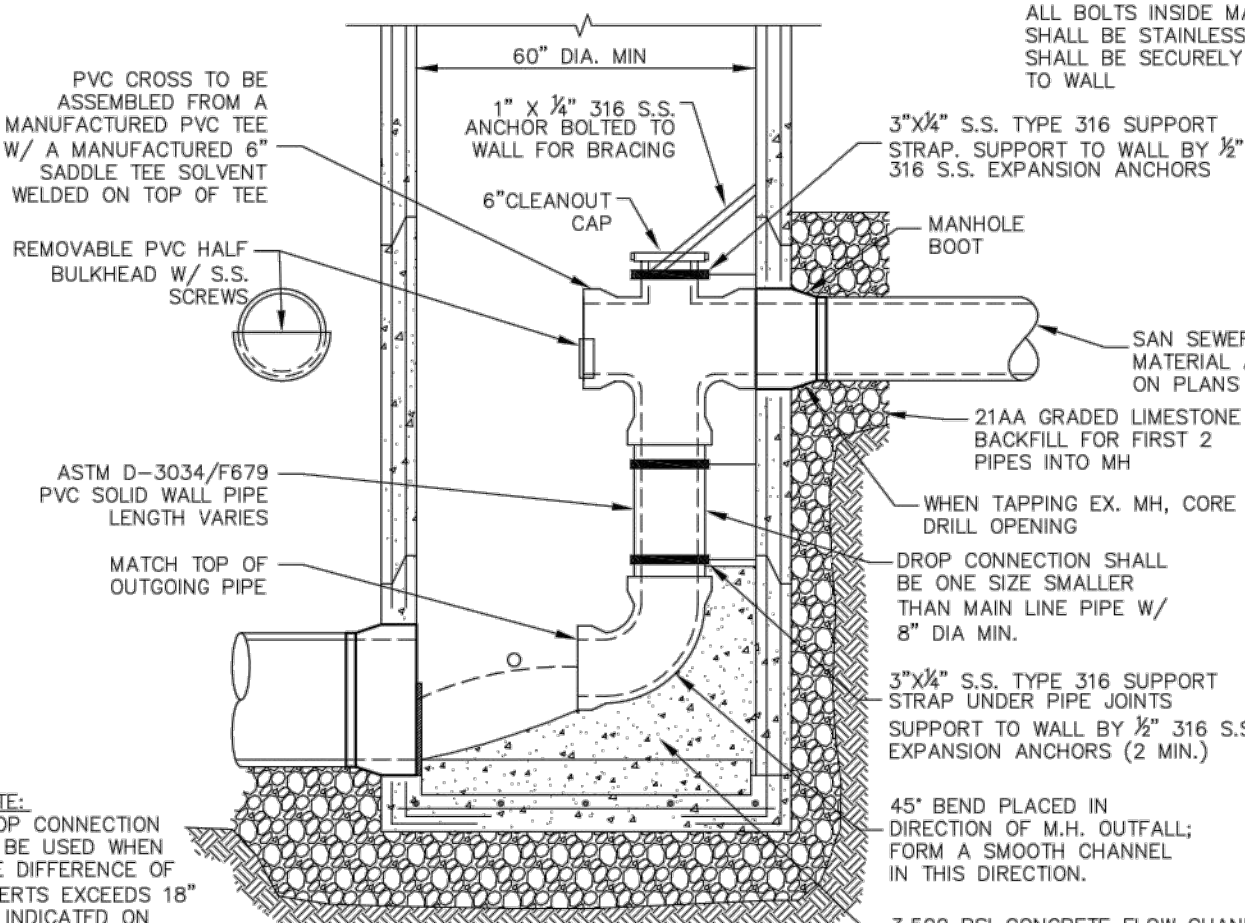


**CONCRETE PIPE**

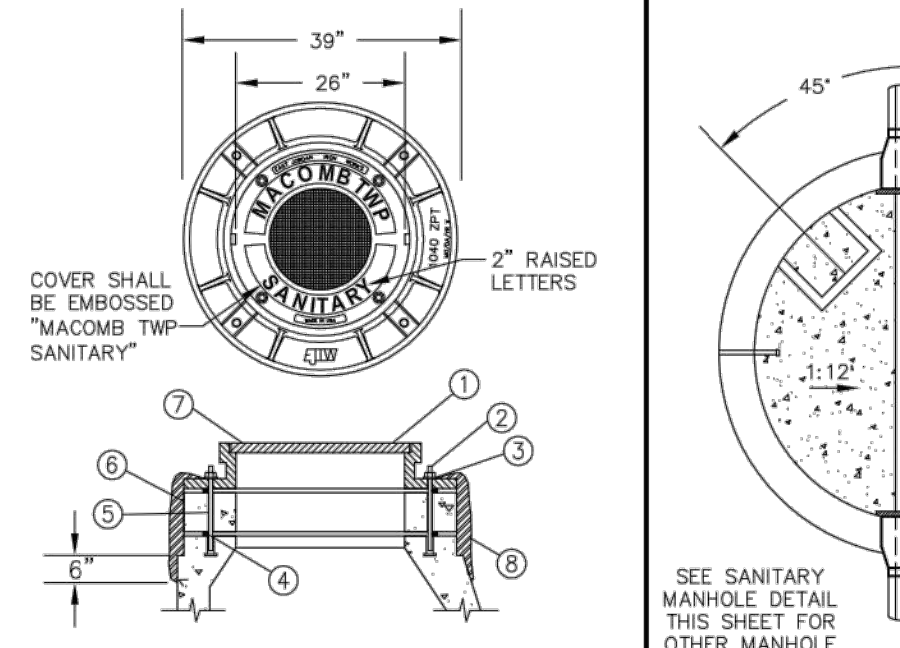
**TAPPING EXISTING SEWER**  
SCALE: NONE



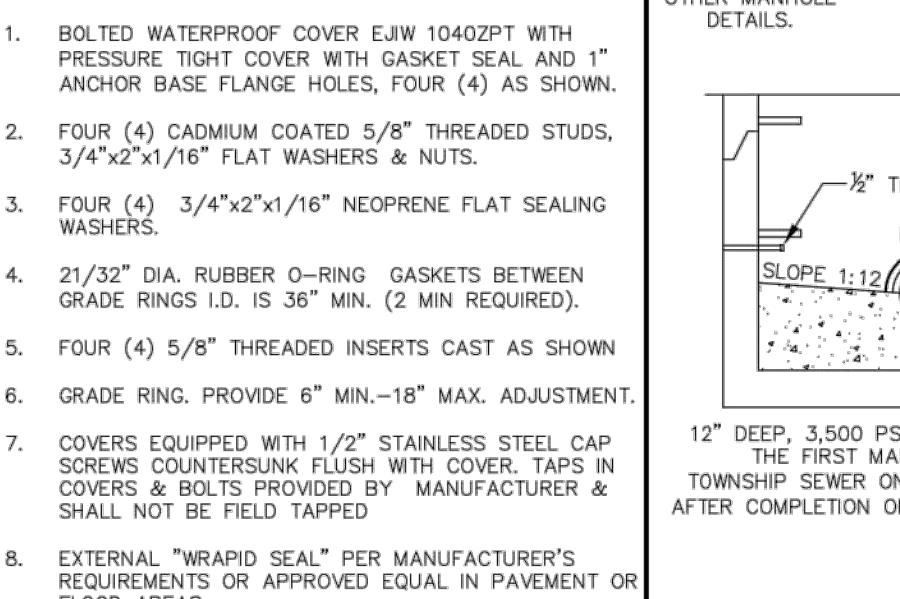
**EXTERIOR DROP ASSEMBLY (W/ SPECIAL APPROVAL)**  
SCALE: NONE



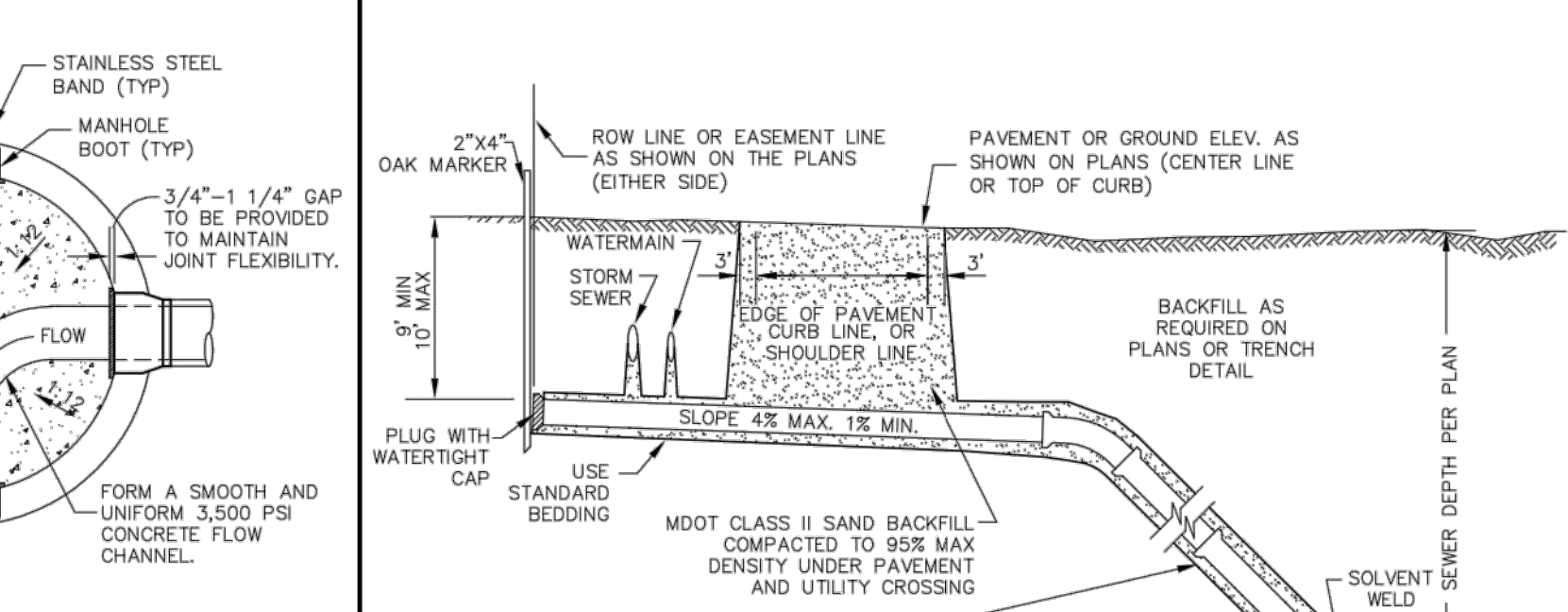
**INTERIOR DROP ASSEMBLY**  
SCALE: NONE



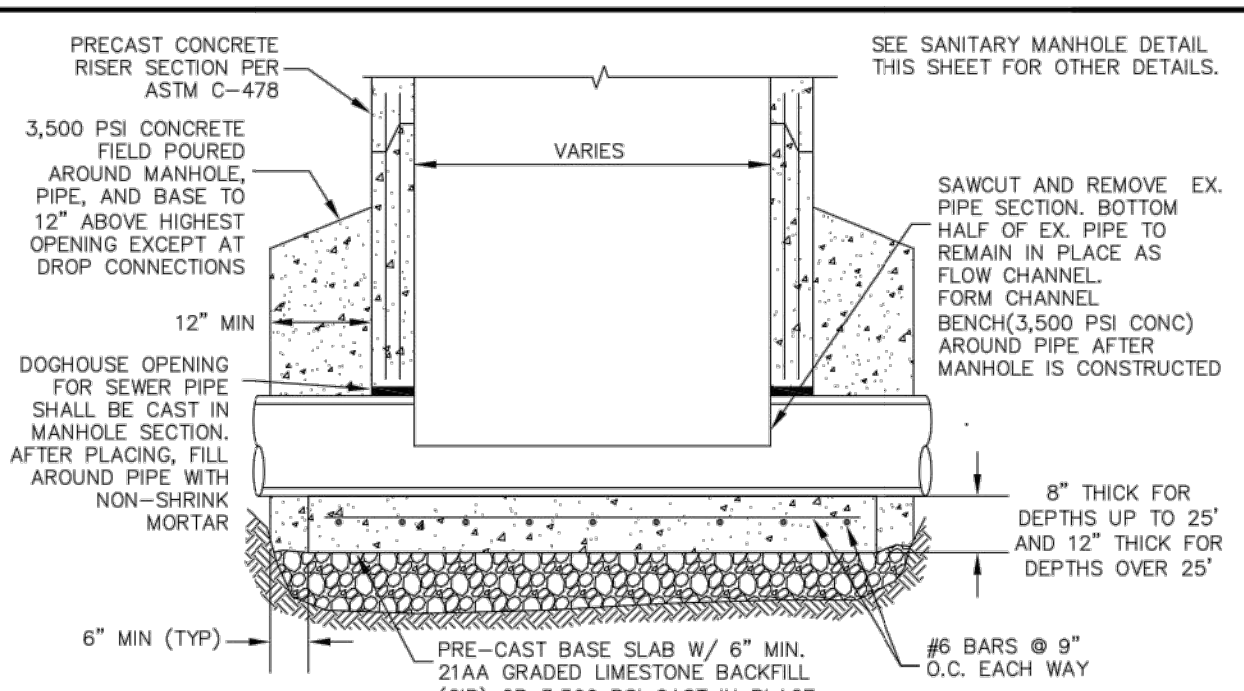
**MANHOLE CHANNEL W/ SUMP DETAIL**  
SCALE: NONE



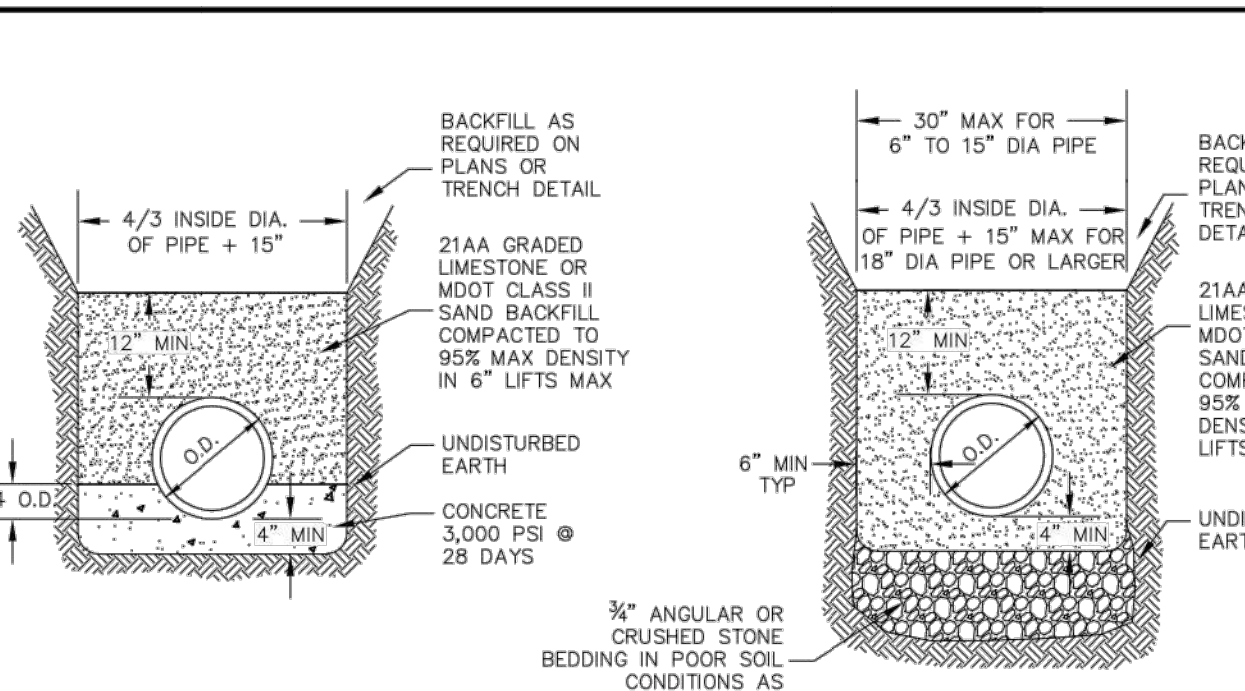
**MANHOLE FRAME & COVER**  
SCALE: NONE



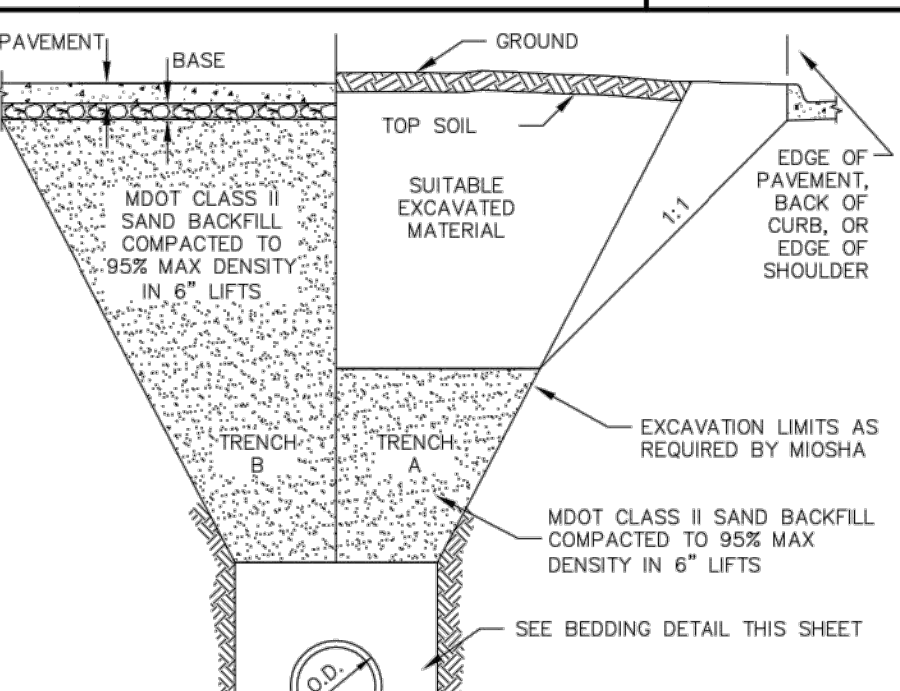
**SANITARY BUILDING SERVICE CONNECTION**  
SCALE: NONE



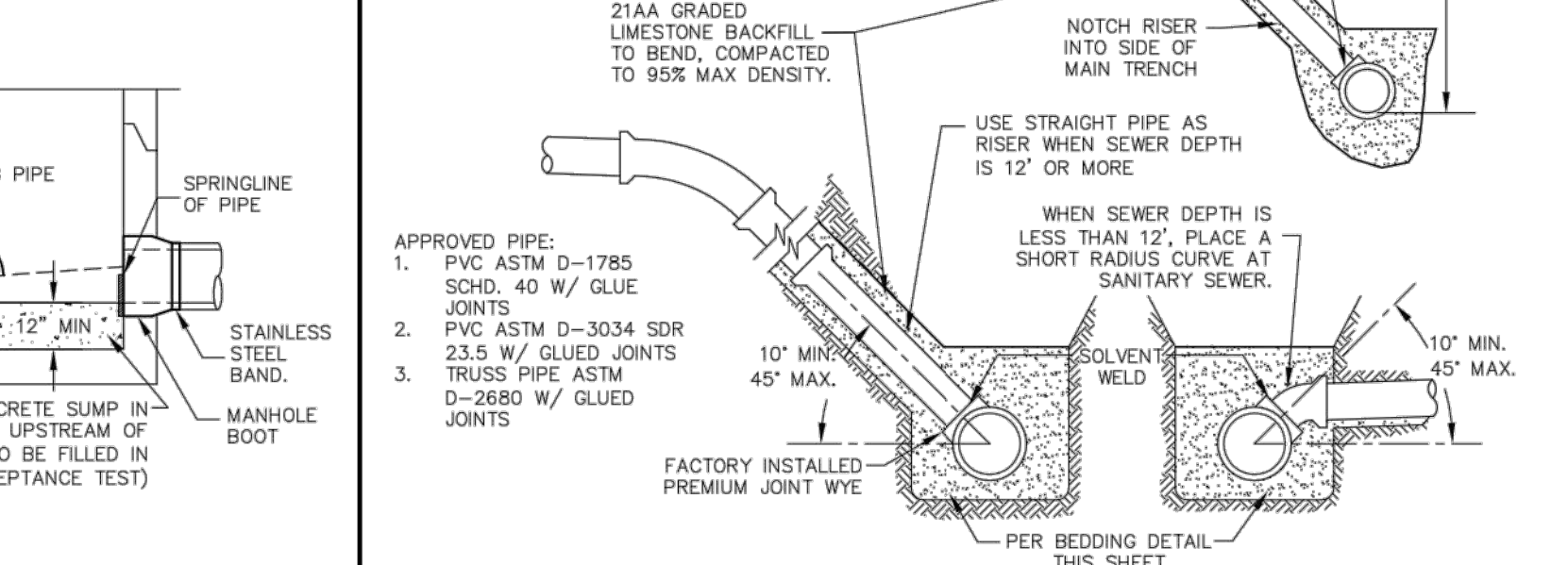
**STANDARD SANITARY MANHOLE OVER EX. SEWER**  
SCALE: NONE



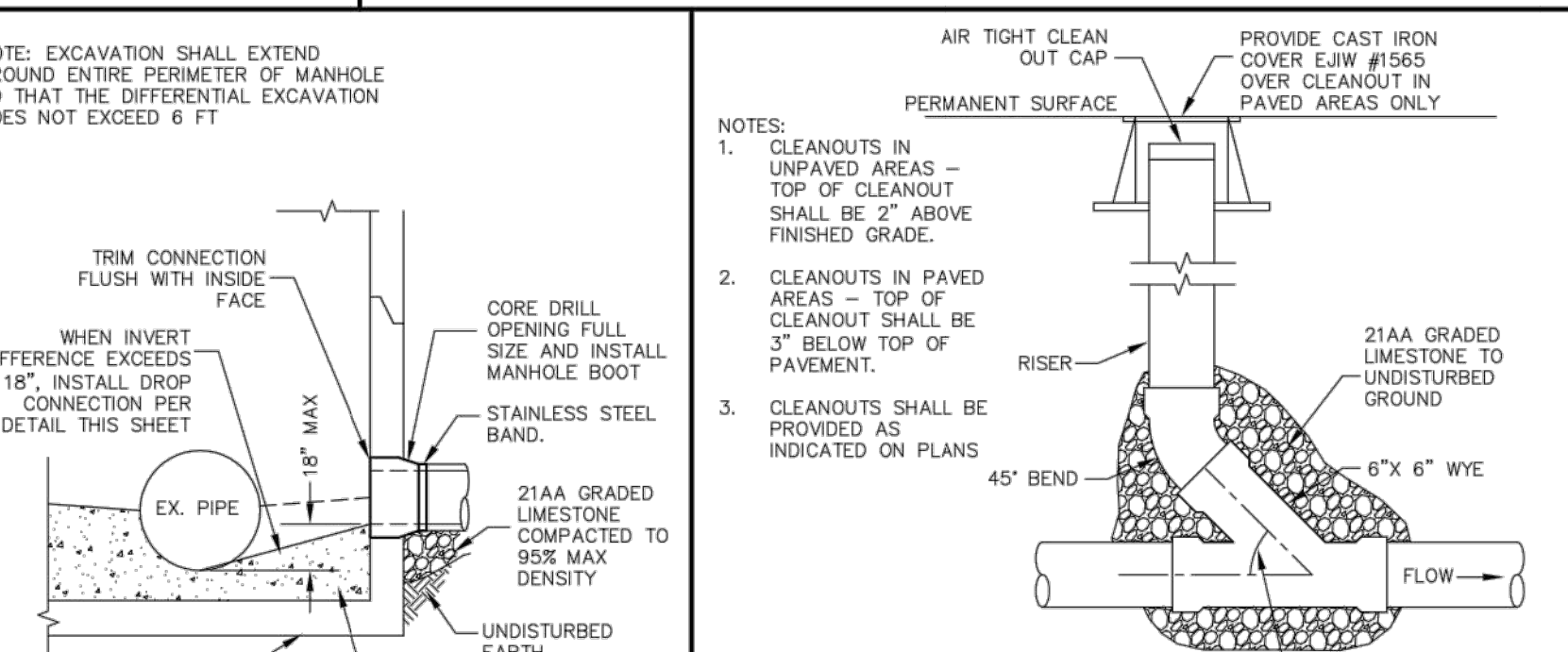
**BEDDING DETAIL**  
SCALE: NONE



**TRENCH DETAIL**  
SCALE: NONE



**CONNECTION TO EX. MANHOLE**  
SCALE: NONE



**SANITARY SEWER CLEANOUT**  
SCALE: NONE

**GENERAL SANITARY SEWER NOTES**

- AT LEAST SEVENTY TWO (72) HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL GIVE NOTIFICATION OF THEIR INTENTION TO BEGIN CONSTRUCTION TO MACOMB TOWNSHIP, THE OFFICE OF THE PUBLIC WORKS COMMISSIONER, MCDOR, MDOT, AND OTHER AGENCIES HAVING JURISDICTION. ALL SANITARY SEWER CONSTRUCTION SHALL HAVE FULL TIME INSPECTION PROVIDED BY MACOMB TOWNSHIP.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY THE TOWNSHIP, AT WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVE WILL BE PRESENT.
- PRIOR TO CONSTRUCTION OF ANY SANITARY SEWERS WHICH ARE TO BE CONNECTED TO THE TOWNSHIP SANITARY SEWER SYSTEM, THE CONTRACTOR MUST HAVE IN THEIR POSSESSION A COPY OF A TOWNSHIP PERMIT TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF THE WASTEWATER DISPOSAL SYSTEM OF THE TOWNSHIP.
- PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (800-482-7171) FOR THE LOCATION OF UNDERGROUND FACILITIES, AND SHALL ALSO NOTIFY REPRESENTATIVES OF ANY OTHER FACILITIES, LOCATED IN THE VICINITY OF THE WORK, WHICH MAY NOT BE HANDLED BY MISS DIG.
- ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF MACOMB TOWNSHIP, MCDOR, MDOT, AND/OR OMCPCW, AS REQUIRED.
- UNLESS OTHERWISE SPECIFIED ON THE PLANS, ALL SANITARY SEWERS GREATER THAN 15" SHALL BE REINFORCED CONCRETE C76 CLASS 4 IN ACCORDANCE WITH ASTM SPECIFICATIONS. JOINTS SHALL HAVE PREMIUM RUBBER O-RINGS OR PROFILE GASKETS CONFORMING TO ASTM C-443.
- UNLESS OTHERWISE SHOWN ON PLANS, ALL SANITARY SEWERS 8" THRU 15" SHALL BE PVC GASKETED TRUSS PIPE ASTM D-2680.
- ALL SANITARY SEWER BEDDING SHALL BE STANDARD BEDDING UNLESS OTHERWISE SHOWN ON THE PLANS.
- ALL SANITARY SEWER WYE OPENINGS SHALL BE FACTORY INSTALLED WITH SOLVENT WELD JOINTS FOR LEAD CONNECTION.
- NO GROUND WATER, STORM WATER, CONSTRUCTION WATER, DOWNSPOUT DRAINAGE, OR WEEP TILE DRAINAGE SHALL BE ALLOWED TO ENTER ANY SANITARY SEWER INSTALLATION.
- NO SANITARY SEWER INSTALLATION OR PORTION THEREOF SHALL HAVE LEAKAGE EXCEEDING 100 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER TWENTY FOUR (24) HOUR PERIOD. EX-FILTRATION TESTING SHALL BE CONDUCTED WHERE GROUND WATER IS INSUFFICIENT.
- AS PART OF THE FINAL INSPECTION AFTER ROAD PAVEMENT HAS BEEN PLACED, THE CONTRACTOR SHALL CLEAN THE SANITARY SEWER AND PROVIDE FOR TELEVISION INSPECTION OF THE SANITARY SEWER LINES IN ACCORDANCE WITH THE CURRENT DETAILED SPECIFICATIONS OF THE TOWNSHIP. A PAN AND TILT CAMERA SHALL BE USED FOR THE TELEVISION INSPECTION WHICH IS CAPABLE OF SCANNING 360° CIRCUMFERENCE AND 270° ON A HORIZONTAL AXIS. THE CAMERA SHALL HAVE A HIGH RESOLUTION LENS WHICH CAN OPERATE IN 100% HUMIDITY.
- AT ALL CONNECTIONS TO AN EXISTING SANITARY SEWER, OR EXTENSION THEREOF, A TEMPORARY WATER TIGHT BULKHEAD WITH A CAPPED ONE INCH DIAMETER PIPE TO PERMIT MEASURING INFILTRATION SHALL BE PROVIDED. A TEMPORARY 12 INCH DEEP MANHOLE SUMP SHALL ALSO BE PROVIDED IN THE FIRST MANHOLE ABOVE THE CONNECTION OR AT A LOCATION AS DIRECTED BY THE TOWNSHIP AND/OR AS INDICATED ON THE PLANS, WHICH WILL BE FILLED IN TO FORM SMOOTH AND UNIFORM CONCRETE FLOW CHANNELS AFTER THE SUCCESSFUL COMPLETION OF ANY INFILTRATION-EXFILTRATION TESTS, AT WHICH TIME THE TEMPORARY WATER TIGHT BULKHEAD SHALL BE REMOVED.
- AIR TEST SHALL, AT MINIMUM, BE PERFORMED ACCORDING TO ASTM C924 FOR CONCRETE AND ASTM F1417 FOR PLASTIC PIPE.
- MANHOLE LIFTING RINGS MUST BE FILLED W/ NON-SHRINK MORTAR AFTER SETTING MANHOLE.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING SANITARY SEWER, WATER OR STORM SEWER SERVICE CONNECTIONS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL ABIDE BY ALL THE REQUIREMENTS OF THE ROAD RIGHT-OF-WAY OWNER REGARDING CONSTRUCTION OF SANITARY SEWERS, MAINTAINING TRAFFIC, BARRICADING, BORING, BACKFILL, AND RESTORATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. THIS INCLUDES LOCATING, REMOVING AND REPLACING, OR TEMPORARILY OR PERMANENTLY RELOCATING EXISTING UTILITIES WITHIN THE INFLUENCE OF CONSTRUCTION. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH LIKE MATERIAL. THE CONTRACTOR SHALL VERIFY DEPTH AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO ANY WORK BEING DONE.



**MACOMB TOWNSHIP**  
54111 BROUGHTON ROAD  
MACOMB, MI 48042  
586-992-0710

**3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171**

NOTE: UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION INCLUDED TO THIS FROM BY THE VARIOUS UTILITY COMPANIES, CITY/COUNTY AGENCIES AND OTHER VARIOUS SOURCES. UNDERGROUND UTILITIES WHICH ARE ON PRIVATE PROPERTY ARE USUALLY NOT DELINEATED UPON A UTILITY COMPANY'S PUBLISHED PLANS. THEIR LOCATION, IF SHOWN UPON THIS SURVEY, ARE APPROXIMATED FROM FOUND PAINT MARKS/STAKES, ETC. AS LOCATED BY THIS FROM SOURCES WHICH ARE UNKNOWN. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

**TOWNSHIP OF MACOMB**

**SANITARY SEWER STANDARD DETAILS**

TOWN J NORTH RANGE 13 EAST  
MACOMB TOWNSHIP  
MACOMB COUNTY

NO.	DATE	REVISION
1	10-15-14	SHEET UPDATE
2	11-6-15	SHEET UPDATE
3	5-10-16	SHEET UPDATE
4	7-11-17	SHEET UPDATE

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

**TACO BELL**  
17669 23 Mile Road  
Macomb, MI 48042



**ENDEAVOR 2.0 TOWNSHIP SANITARY DETAILS**

**C-508**

PLOT DATE:



**MACOMB TOWNSHIP**  
54111 BROUGHTON ROAD  
MACOMB, MI 48042  
586-992-0710

**3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171**

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PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

**TOWNSHIP OF MACOMB**  
WATER MAIN STANDARD DETAILS

**FOR REFERENCE ONLY**

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

TOWN NORTH RANGE 13 EAST  
MACOMB TOWNSHIP  
MACOMB COUNTY

NO.	DATE	REVISION
1	10-15-14	SHEET UPDATE
2	11-06-15	SHEET UPDATE
3	12-14-15	SHEET UPDATE
4	5-10-16	SHEET UPDATE
5	7-14-17	SHEET UPDATE
6	2-1-22	SHEET UPDATE

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
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**TACO BELL**  
17669 23 Mile Road  
Macomb, MI 48042



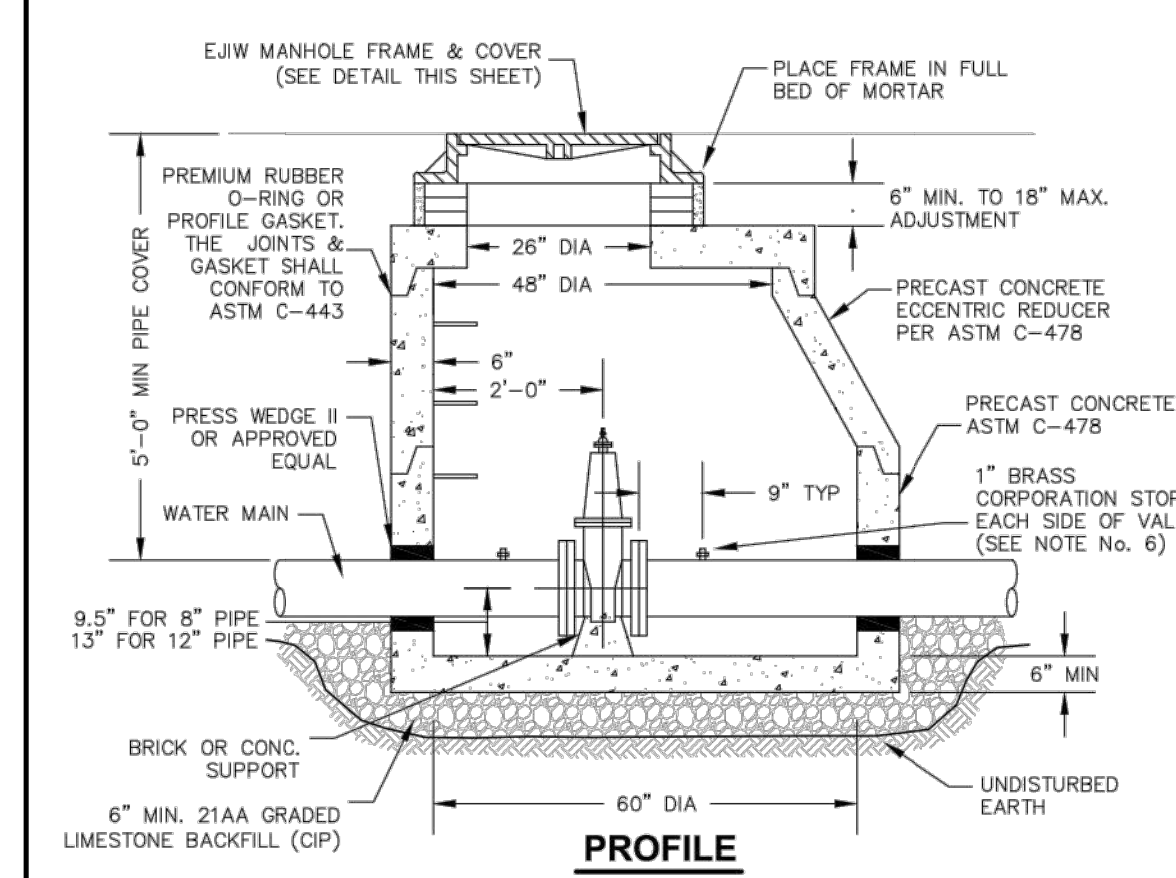
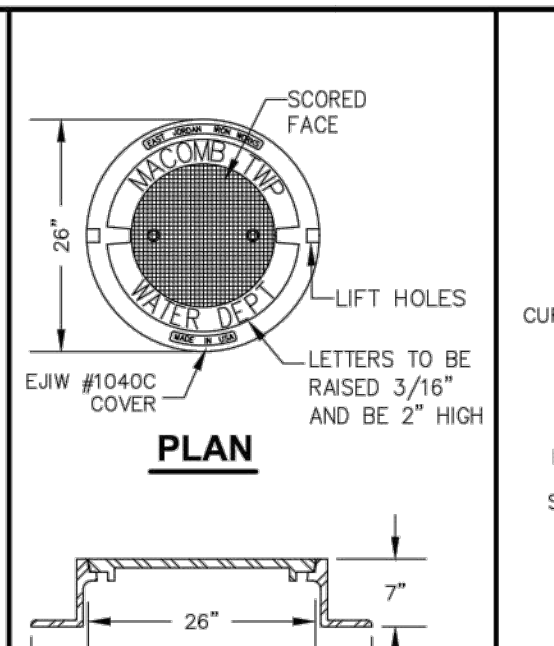
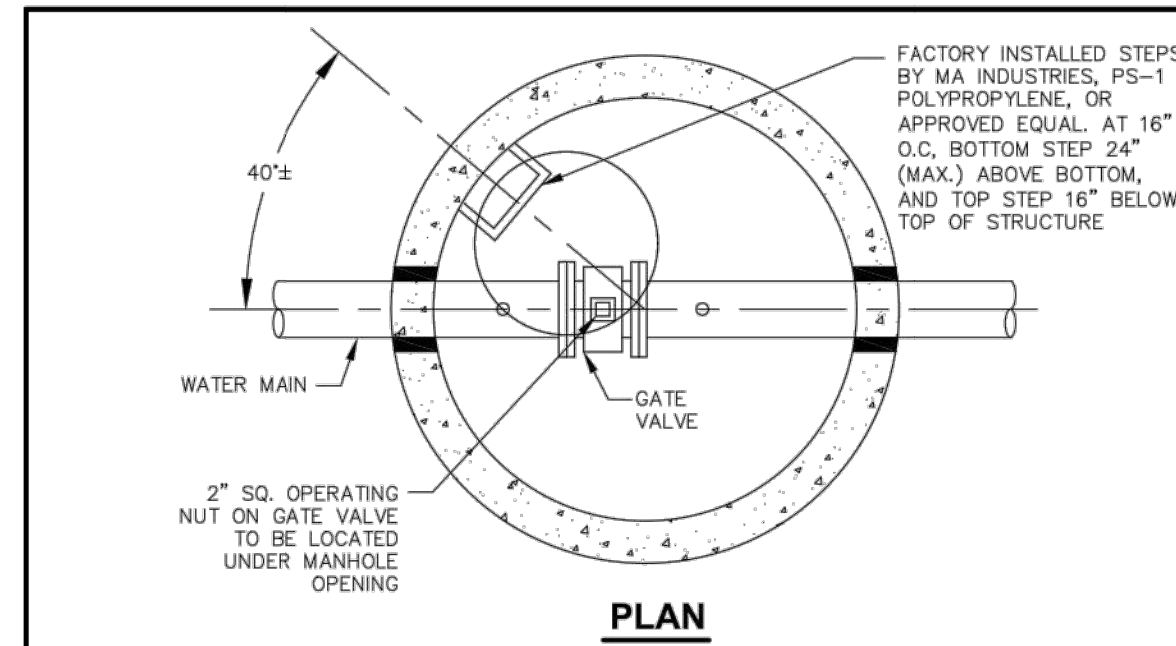
**ENDEAVOR 2.0 TOWNSHIP WATER DETAILS**

**C-509**

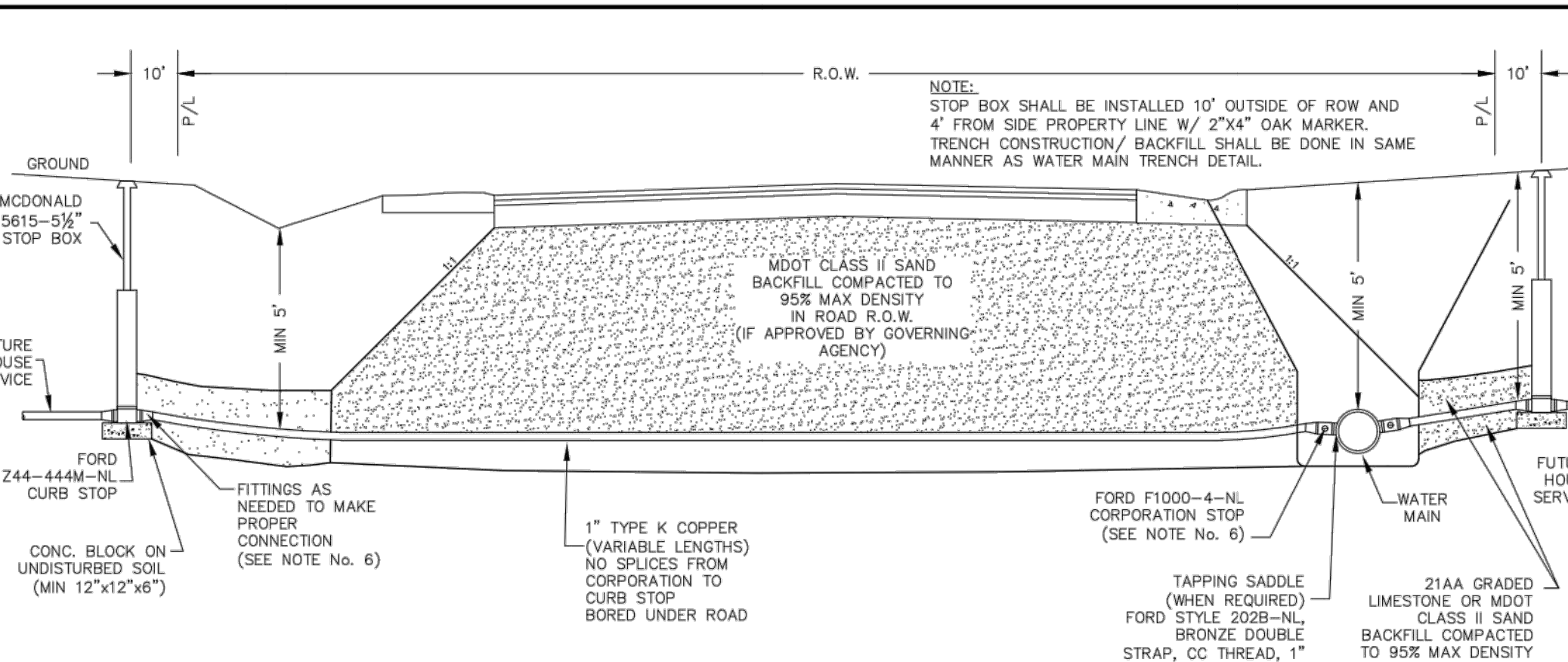
PLOT DATE:

**GENERAL WATER MAIN NOTES**

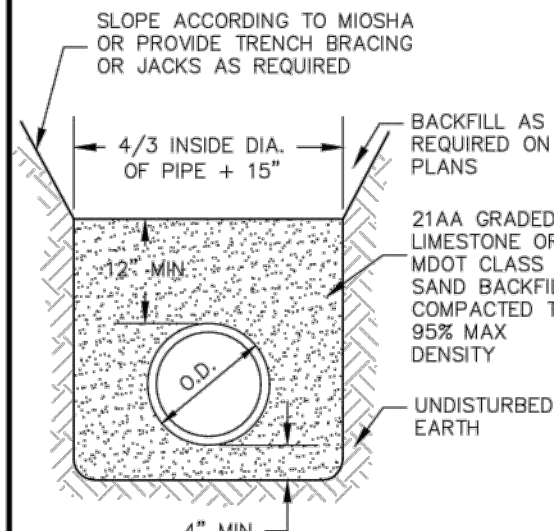
- CONTRACTOR SHALL NOTIFY MACOMB TOWNSHIP AND ALL OTHER AGENCIES HAVING JURISDICTION AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF CONSTRUCTION ACTIVITIES. ALL WATER MAIN CONSTRUCTION SHALL HAVE FULL TIME INSPECTION PROVIDED BY MACOMB TOWNSHIP.
- PRIOR TO CONSTRUCTION START-UP, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE, AS ARRANGED BY MACOMB TOWNSHIP, AT WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT.
- PRIOR TO CONSTRUCTING ANY WATER MAIN WHICH IS TO BE CONNECTED AND/OR EXTENDED FROM THE TOWNSHIP'S WATER SUPPLY SYSTEM, THE CONTRACTOR MUST HAVE IN THEIR POSSESSION A COPY OF A VALID PERMIT TO CONSTRUCT SAID WATER MAIN.
- PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL MISS DIG AT 811 OR 800-482-7171 FOR LOCATION OF EXISTING UNDERGROUND FACILITIES, AND SHALL NOTIFY REPRESENTATIVES OF ANY OTHER FACILITIES LOCATED IN THE VICINITY OF WORK, WHICH MAY NOT BE HANDLED BY MISS DIG.
- ALL WATER MAIN SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF MACOMB TOWNSHIP, MCDR, MDOT AND/OR MCOFPA, AS REQUIRED.
- ALL WATER MAIN SYSTEM CONSTRUCTION SHALL CONFORM TO THE "REDUCTION OF LEAD IN DRINKING WATER ACT" NOT CONTAINING MORE THAN 0.25% LEAD WHEN USED WITH RESPECT TO SOLDER AND FLUX AND NOT MORE THAN A WEIGHTED AVERAGE OF 0.25% LEAD WHEN USED WITH RESPECT TO THE WETTED SURFACES OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS AND FIXTURES.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL WATER MAIN PIPE SHALL BE DUCTILE IRON, CLASS 54 FOR 16 INCH AND LESS AND CLASS 56 FOR PIPES GREATER THAN 18 INCHES IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 DOUBLE THICKNESS CEMENT LINING WITH PUSH ON JOINTS. ONLY NEW UNDAMAGED PIPE SHALL BE USED. THE TOWNSHIP HAS THE RIGHT TO REJECT ANY AND ALL PIPE. PUSH ON JOINTS SHALL TYTON, SUPER BELLITE OR APPROVED EQUAL WITH SERRATED BRASS WEDGES. 6 INCH THRU 12 INCH PIPE REQUIRES TWO (2) WEDGES PER JOINT. 16 INCH AND LARGER PIPE REQUIRES FOUR (4) WEDGES PER JOINT.
- UNLESS OTHERWISE INDICATED IN A WATER MAIN PROFILE, WATER MAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF FIVE (5) FEET AS MEASURED FROM THE PERMANENT PAVEMENT CENTERLINE (OR EXISTING ROAD ELEVATION IF THE PERMANENT PAVEMENT ELEVATION IS NOT KNOWN) ELEVATION OR EXISTING GROUND AT THE WATER MAIN, WHICHEVER RESULTS IN A LOWER ELEVATION. WATER MAIN SHALL BE INSTALLED WITH A MAX. COVER OF SEVEN (7) FEET UNLESS APPROVED BY THE TOWNSHIP ENGINEER. A MIN. CLEARANCE OF 18 INCHES SHALL BE MAINTAINED WHENEVER THE WATER MAIN CROSSES UNDER OTHER UTILITIES AND A MIN. DEPTH OF FIVE (5) FEET SHALL BE MAINTAINED WHEN CROSSING A DITCH. WHERE WATER MAIN MUST DIP UNDER OTHER UTILITIES OR DITCHES, PLACE 22 1/2" VERTICAL BENDS AND ANCHORAGES ACCORDING TO THE STANDARD DETAILS.
- UNLESS OTHERWISE NOTED ON THE PLANS, HYDRANTS SHALL BE "L" TYPE AND SHALL BE SET TO THE ELEVATION OF THE EXISTING GROUND. WHEN THE EXISTING GROUND IS HIGHER THAN 0.5 FEET ABOVE THE ROAD CENTERLINE, THE HYDRANT SHALL BE EXTENDED UPWARD (FROM 0.5 FEET ABOVE THE ROAD CENTERLINE) BY INSERTING BARREL EXTENSIONS BETWEEN THE HEAD AND THE TOP BARREL FLANGE.
- CONCRETE THRUST BLOCKS SHALL BE PLACED AT ALL BENDS, CAPS, PLUGS OR TEES ACCORDING TO THE STANDARD DETAILS. CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS. LOCKING GLANDS SHALL BE PLACED ON ALL BENDS.
- RESTRAINED JOINTS FOR PIPE SIZES UP TO 16 INCHES SHALL BE MEGA LUGS OR APPROVED EQUAL. RESTRAINED JOINTS FOR PIPE SIZES OVER 16 INCHES SHALL BE FLEX JOINT PIPE OR APPROVED EQUAL BOLTLESS SYSTEM.
- UNLESS OTHERWISE SHOWN ON THE PLANS, ALL WATER MAIN BEDDING SHALL BE STANDARD BEDDING.
- WATER MAIN SHALL BE PLACED LEVEL THROUGH ALL GATE WELLS.
- ALL END OF LINE GATE WELLS SHALL HAVE STUBS EXTENDING TEN (10) FEET FROM THE CENTERLINE OF THE WELL AND ENDING WITH A CAP AND ADEQUATE THRUST BLOCK.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL GATE WELL FRAME AND COVERS SHALL BE SET TO THE ELEVATION OF THE EXISTING GROUND (FROM 0.5 FEET ABOVE THE ROAD CENTERLINE, WHICHEVER IS HIGHER). COVERS SHALL INCLUDE THE TOWNSHIP'S STANDARD MARKINGS.
- GATE VALVES SHALL BE RESILIENT SEATED VALVES CONFORMING TO THE REQUIREMENTS OF ANSI/AWWA C-915. ALL GATE VALVES SHALL BE STANDARD TURN LEFT TO OPEN. EACH VALVE SHALL HAVE A SMOOTH UNOBSTRUCTED WATERWAY FREE FROM ANY SEDIMENT DEPOSITS. THE VALVE SHALL BE FURNISHED WITH A 2 INCH SQUARE OPERATING NUT.
- EXTENSION STEMS AND STEM GUIDES SHALL BE PROVIDED IN EACH GATE WELL WHERE THE VALVE OPERATING NUT IS FURTHER THAN FIVE FEET FROM THE TOP OF THE GATE WELL COVER. EXTENSION STEMS SHALL EXTEND TO WITHIN FIVE FEET OF THE FINAL COVER ELEVATION. EXTENSION STEMS WILL BE SECURED IN PLACE WITH BRACKETS ATTACHED TO THE RISER SECTIONS.
- AFTER THE WATER MAIN HAS BEEN PLACED AND BACKFILLED, EACH SECTION OF THE MAIN BETWEEN GATE VALVES OR TEST PLUGS/CAPS SHALL BE HYDROSTATICALLY TESTED FOR LEAKAGE. FOR DUCTILE IRON AND PVC PIPE THE TEST SHALL BE IN ACCORDANCE WITH THE CURRENT ANSI/AWWA C800 (FOR DI) AND C605 (FOR PVC) STANDARDS. THE PIPE SHALL BE TESTED FOR LEAKAGE AT A PRESSURE OF 150 PSI MAINTAINED FOR A MINIMUM TWO-HOUR PERIOD. THE MAXIMUM PERMISSIBLE LEAKAGE UNDER TEST PRESSURE SHALL NOT EXCEED A RATE OF 0.0025 GAL/HR/INCH DIA. OF MAIN, PER 1,000 LINEAL FEET OF PIPE. PIPE HOLE SHALL BE TESTED IN ACCORDANCE WITH ASTM F2164. DISINFECT WATER MAINS IN ACCORDANCE WITH AWWA C651 AND THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE) REQUIREMENTS. NO DIRECT CONNECTIONS SHALL BE MADE UNTIL ALL DISINFECTION AND HYDROSTATIC PRESSURE TESTS HAVE BEEN SATISFACTORILY COMPLETED. APPROVAL TO PROCEED WITH THE WATER MAIN CONNECTION SHALL BE RECEIVED FROM THE TOWNSHIP.
- ALL GATE VALVES SHALL BE OPERATED BY MACOMB TOWNSHIP WATER AND SEWER DEPARTMENT PERSONNEL ONLY.



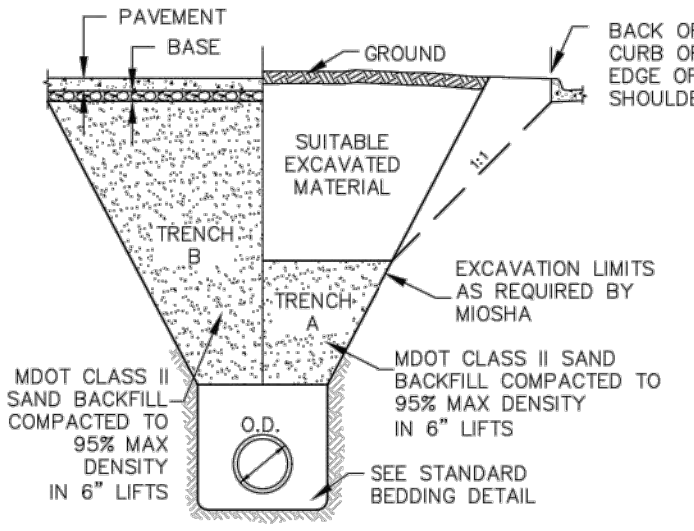
**8" & 12" DIA. WATER MAIN STANDARD GATE VALVE & WELL**  
SCALE: NONE



**TYPICAL HOUSE SERVICE**  
SCALE: NONE



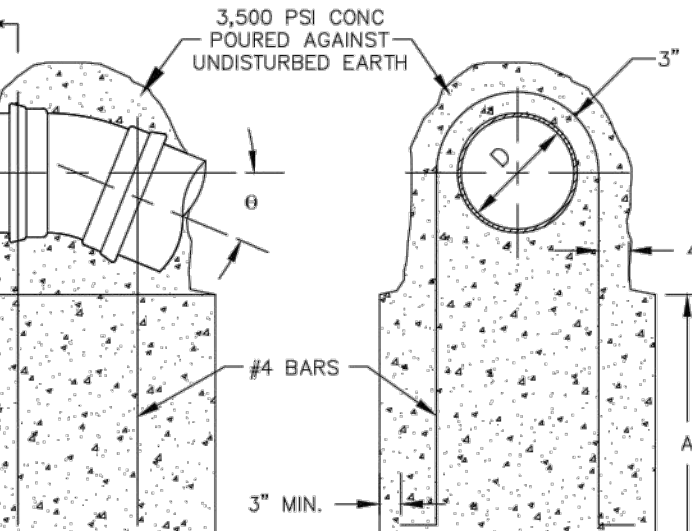
**STANDARD BEDDING**  
SCALE: NONE



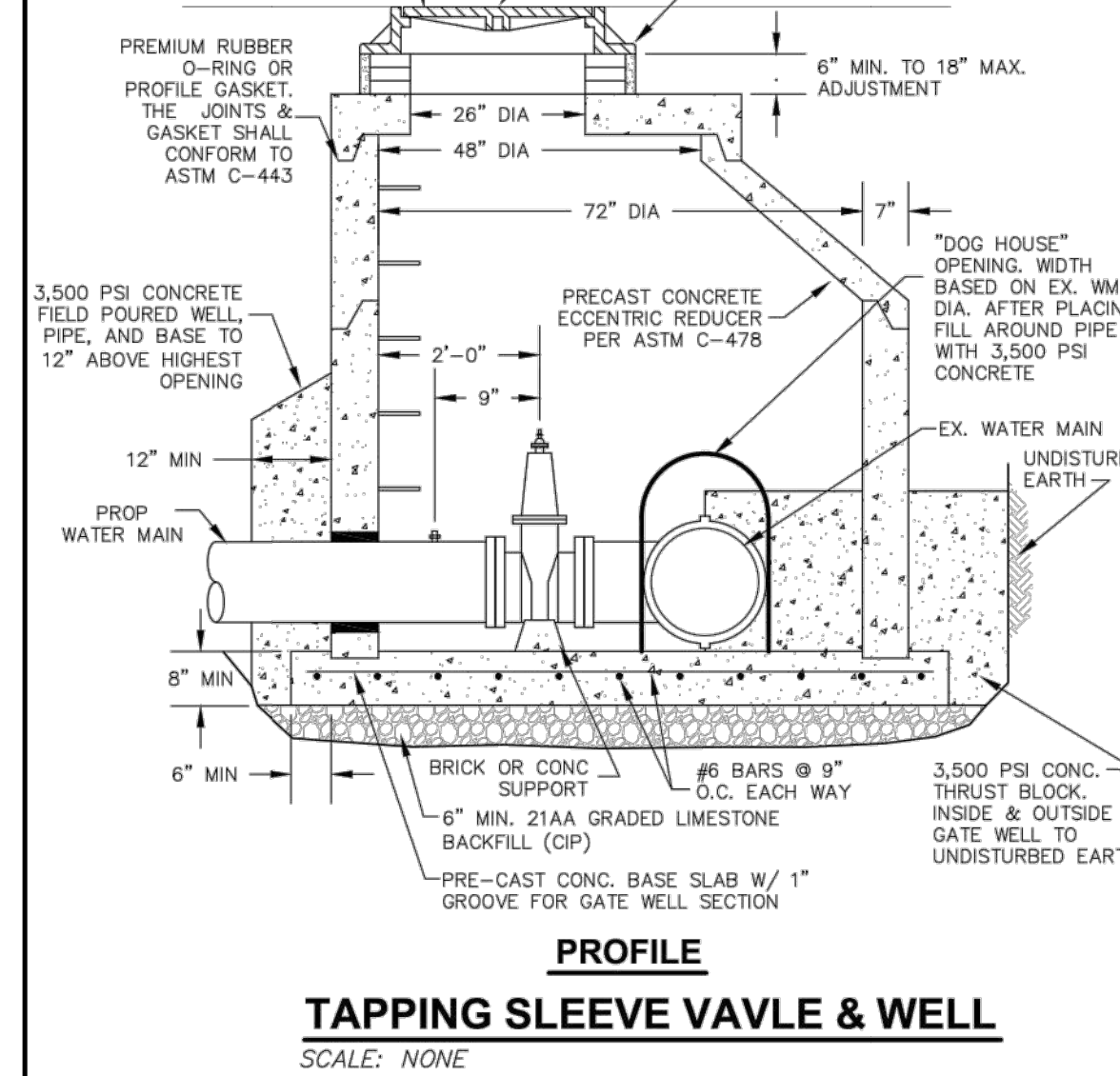
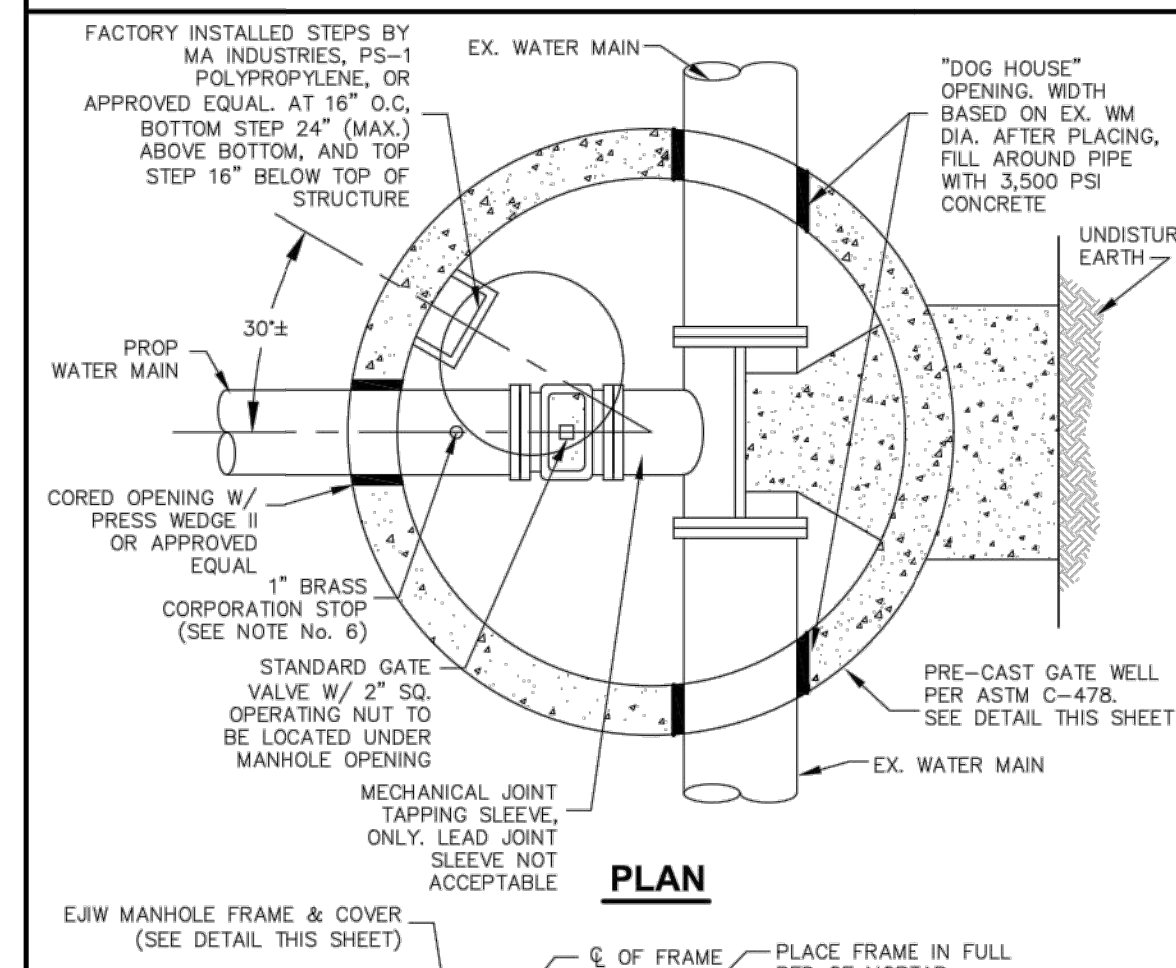
**TRENCH DETAIL**  
SCALE: NONE

PIPE DIA "D"	BEND Θ	A	# OF BARS
6"	45°	2'-0"	2
8"	22 1/2°	2'-0"	2
12"	45°	3'-3"	2
16"	22 1/2°	3'-3"	2
20"	45°	4'-0"	3
24"	22 1/2°	4'-0"	3

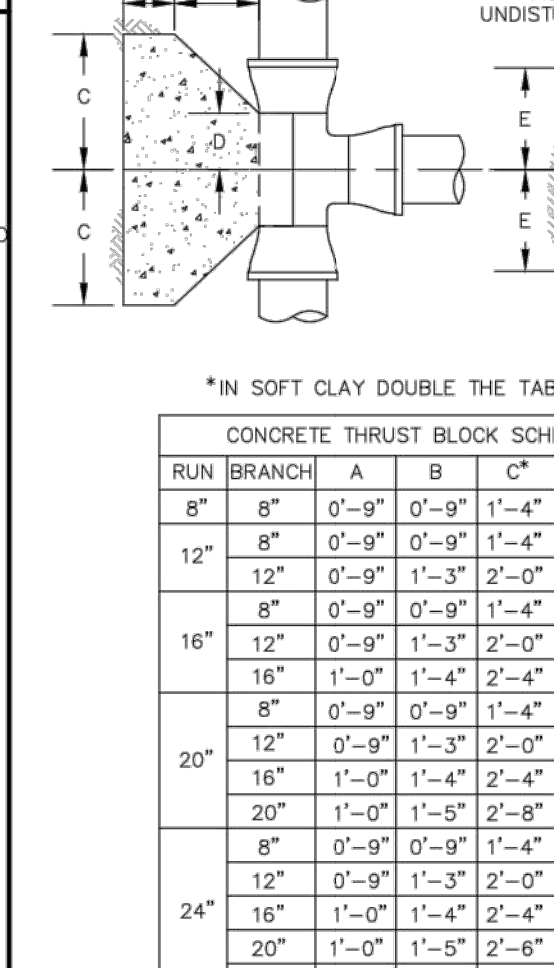
**CONCRETE THRUST BLOCK SCHEDULE FOR HORIZONTAL BENDS**



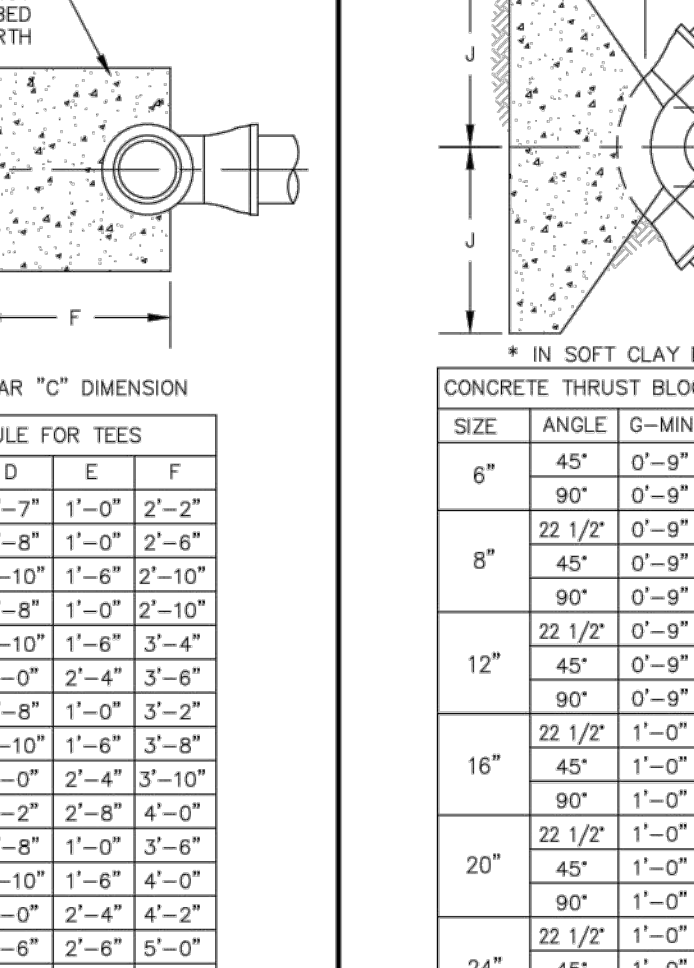
**VERTICAL ANCHORAGE**  
SCALE: NONE



**TAPPING SLEEVE VALVE & WELL**  
SCALE: NONE



**CONCRETE THRUST BLOCK FOR TEES**  
SCALE: NONE

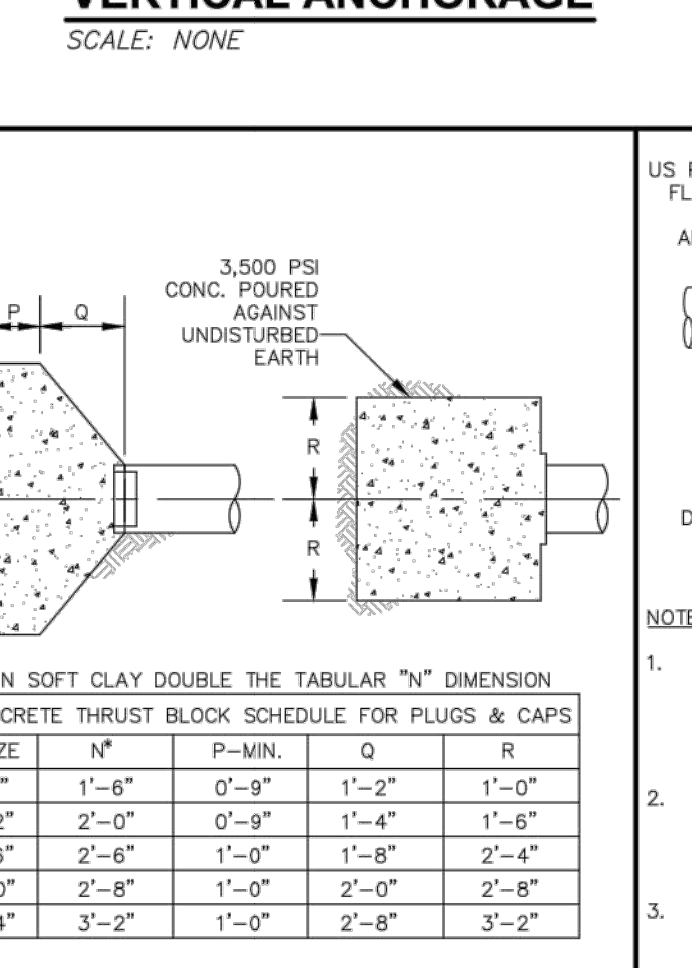


**CONCRETE THRUST BLOCK FOR BENDS**  
SCALE: NONE

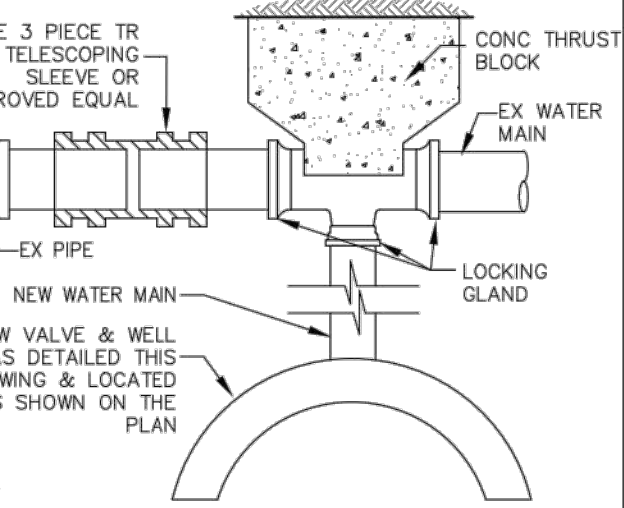
\* IN SOFT CLAY DOUBLE THE TABULAR "C" DIMENSION

CONCRETE THRUST BLOCK SCHEDULE FOR TEES
RUN BRANCH A B C D E F
8" 8" 0'-9" 0'-9" 1'-4" 0'-7" 1'-0" 2'-2"
12" 8" 0'-9" 0'-9" 1'-4" 0'-7" 1'-0" 2'-6"
12" 12" 0'-9" 1'-3" 2'-0" 0'-10" 1'-6" 2'-10"
16" 8" 0'-9" 0'-9" 1'-4" 0'-7" 1'-0" 2'-10"
16" 12" 0'-9" 1'-3" 2'-0" 0'-10" 1'-6" 3'-6"
20" 8" 0'-9" 0'-9" 1'-4" 0'-7" 1'-0" 3'-2"
20" 12" 0'-9" 1'-3" 2'-0" 0'-10" 1'-6" 3'-8"
24" 8" 0'-9" 0'-9" 1'-4" 0'-7" 1'-0" 3'-10"
24" 12" 0'-9" 1'-3" 2'-0" 0'-10" 1'-6" 3'-10"
24" 16" 0'-9" 1'-3" 2'-0" 0'-10" 1'-6" 4'-0"
24" 20" 0'-9" 1'-3" 2'-0" 0'-10" 1'-6" 4'-0"
24" 24" 0'-9" 1'-3" 2'-0" 0'-10" 1'-6" 4'-0"

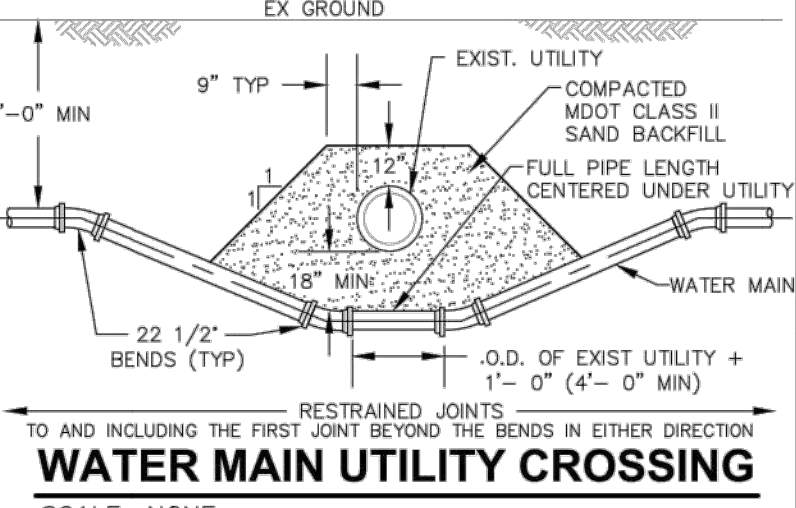
**CONCRETE THRUST BLOCKS FOR PLUGS & CAPS**  
SCALE: NONE



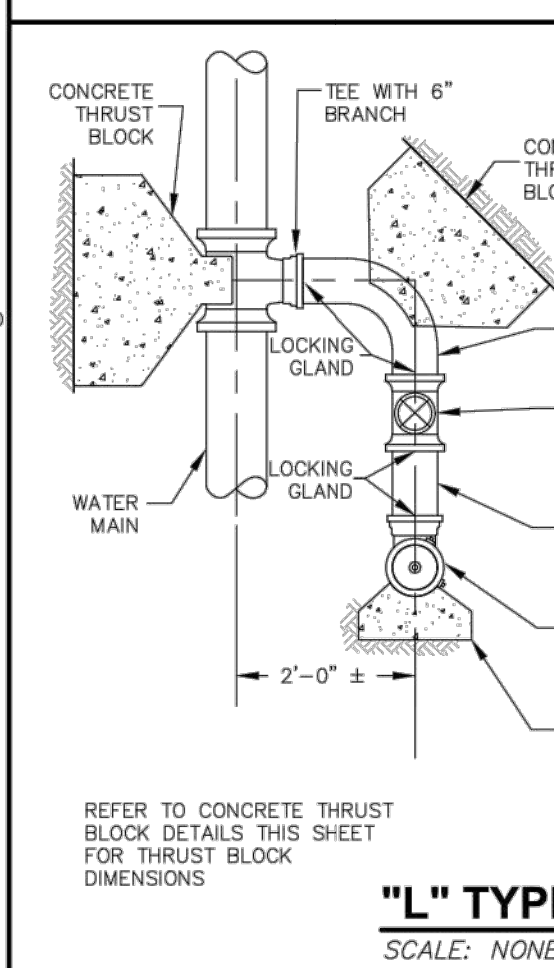
**NEW TEE ON EXISTING MAIN**  
SCALE: NONE



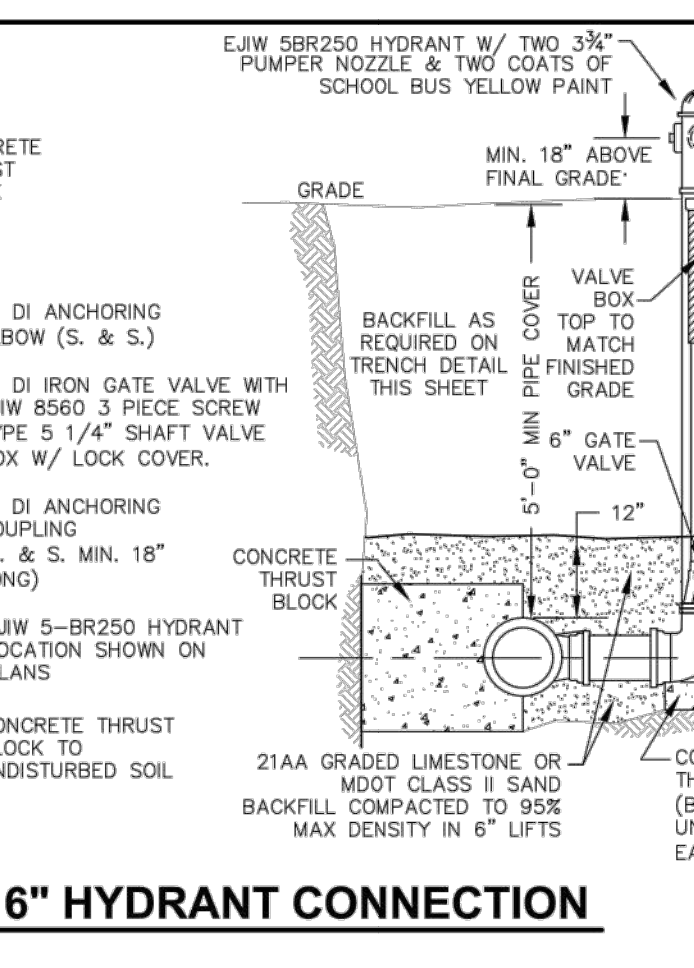
**WATER MAIN UTILITY CROSSING**  
SCALE: NONE



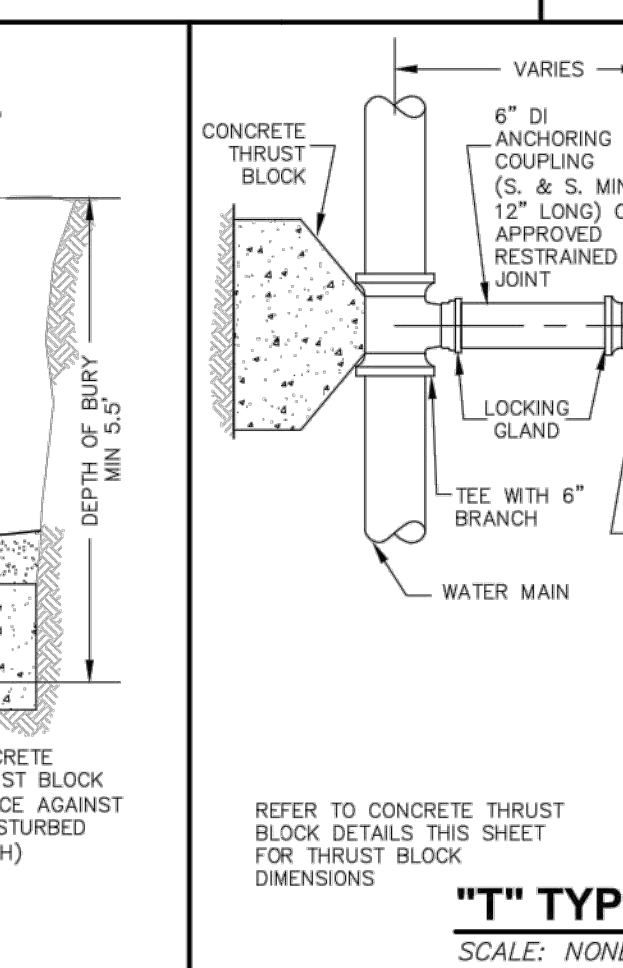
**DITCH AND STREAM CROSSING**  
SCALE: NONE



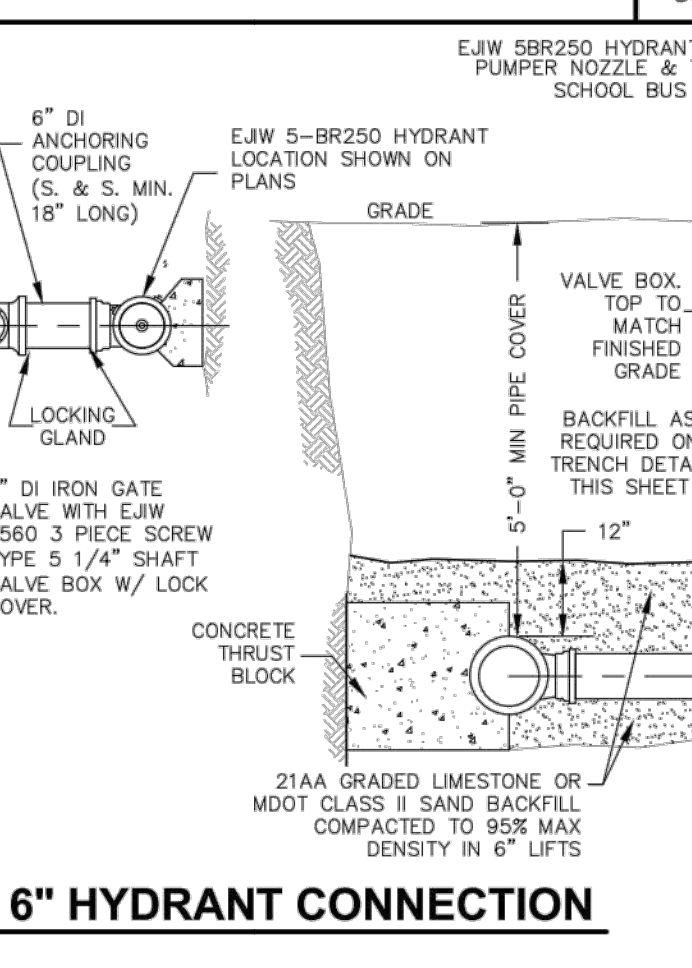
**"L" TYPE 6" HYDRANT CONNECTION**  
SCALE: NONE



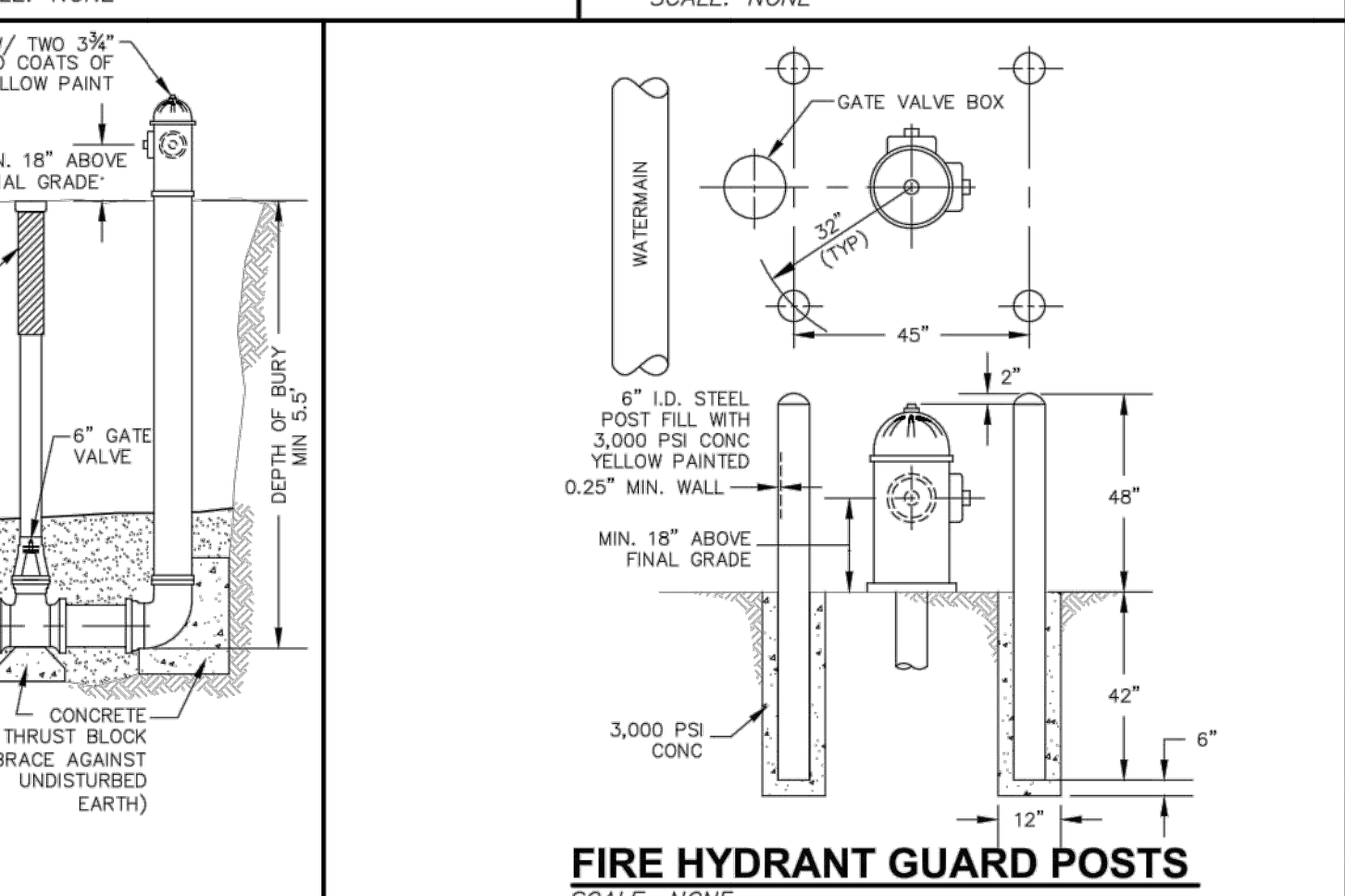
**"T" TYPE 6" HYDRANT CONNECTION**  
SCALE: NONE



**FIRE HYDRANT GUARD POSTS**  
SCALE: NONE



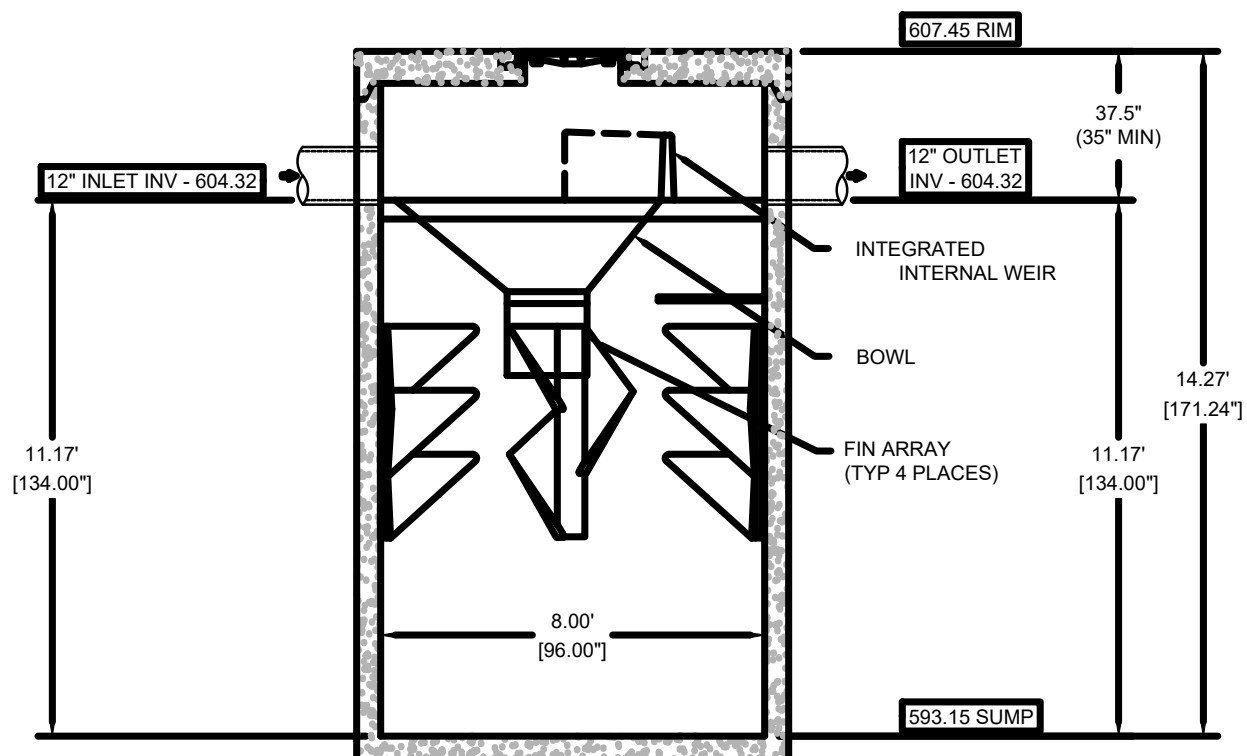
**VERIFY SCALES**  
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY



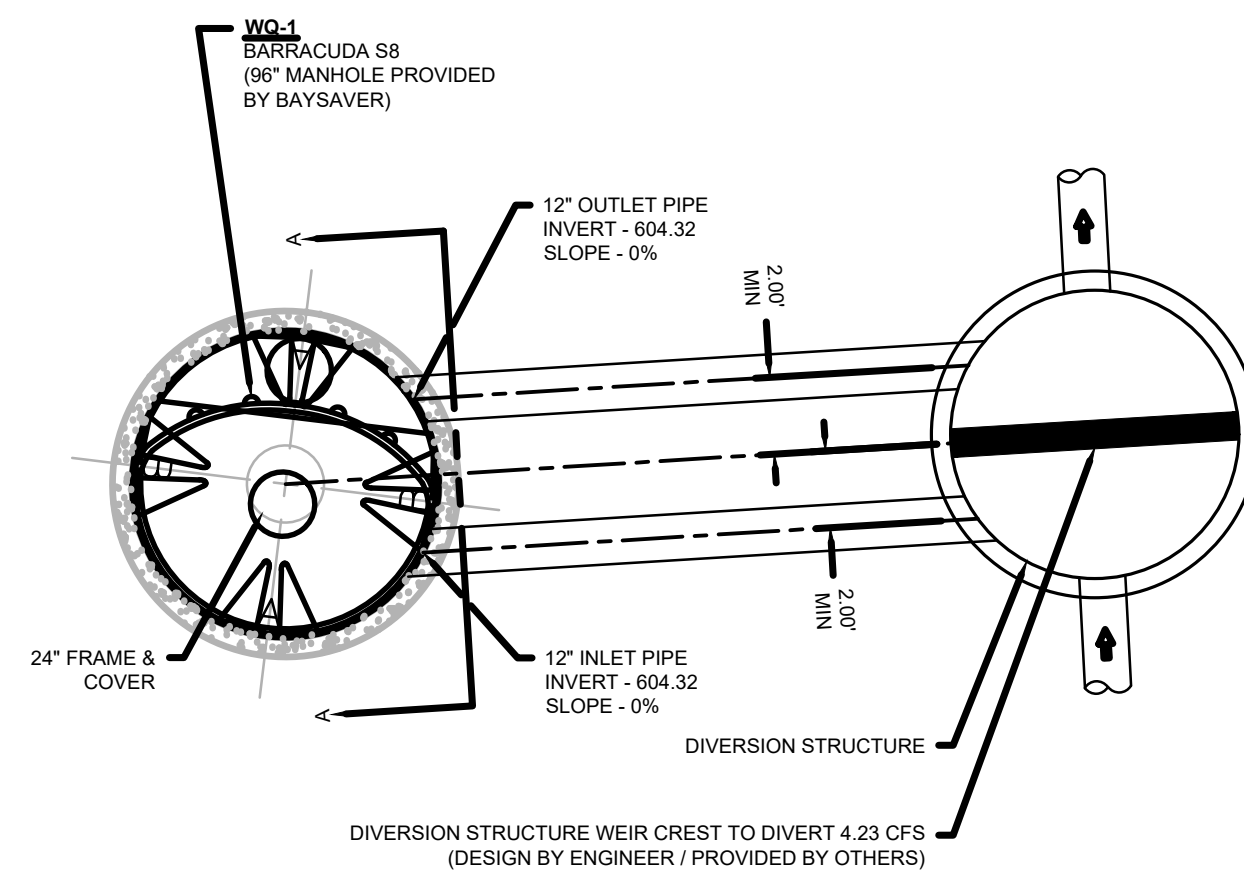
JOB NO. MA-DET-WM  
SCALE: N.T.S. SHEET NO. WI

**PRODUCT SPECIFICATIONS**

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.



**SECTION VIEW A-A**  
SCALE: 1/4" = 1'-0"



**SITE SPECIFIC PLAN VIEW**  
SCALE: 1" = 6'

BARRACUDA S8	
UNIT ID	WQ-1
PEAK FLOW RATE (CFS)	**
TREATMENT FLOW RATE (CFS)	6.08

TACO BELL	DATE	DRAWN	CHECKED
#####	#####	#####	#####
PROJECT #	DATE	DATE	DATE
#####	#####	#####	#####
<b>Barracuda Max</b>			
Stormwater Separator			
4640 TELEMAN BLVD HELLARD, OH 43026			
AS NOTED			
C-510 SHEET 9 OF #			



FOR  
REFERENCE  
ONLY

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

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 PLAN VERSION: MARCH 2021  
 BRAND DESIGNER: DICKSON  
 SITE NUMBER: 315390  
 STORE NUMBER: 457226  
 PA/PM: SM  
 DRAWN BY.: EA  
 JOB NO.: 2021088.48

TACO BELL

17669 23 Mile Road  
 Macomb, MI 48042



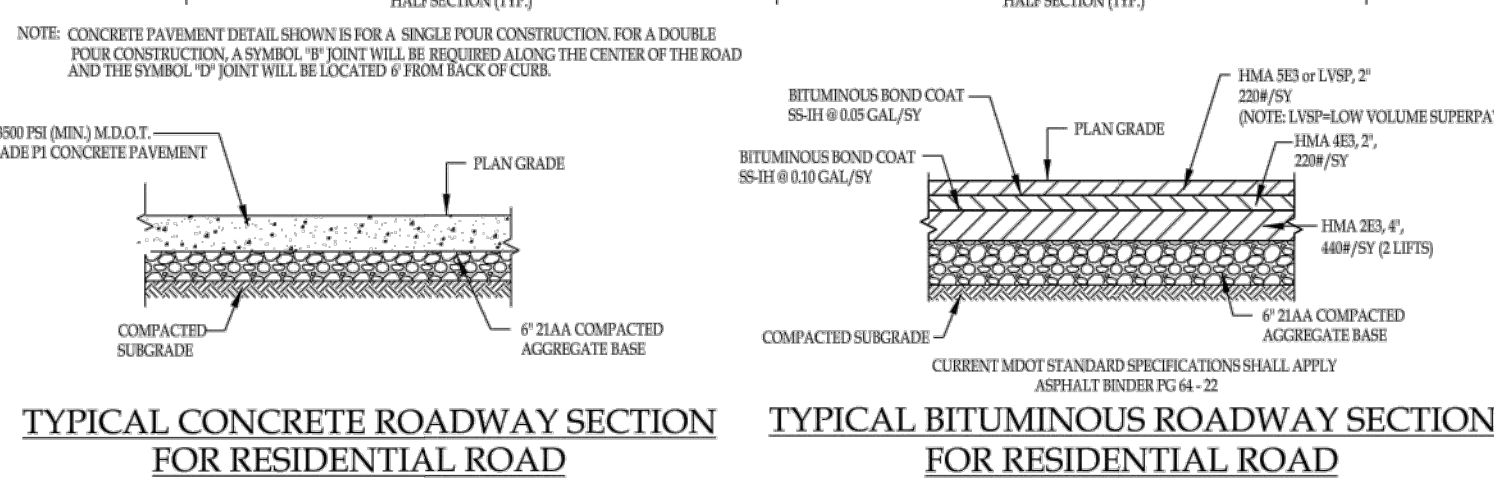
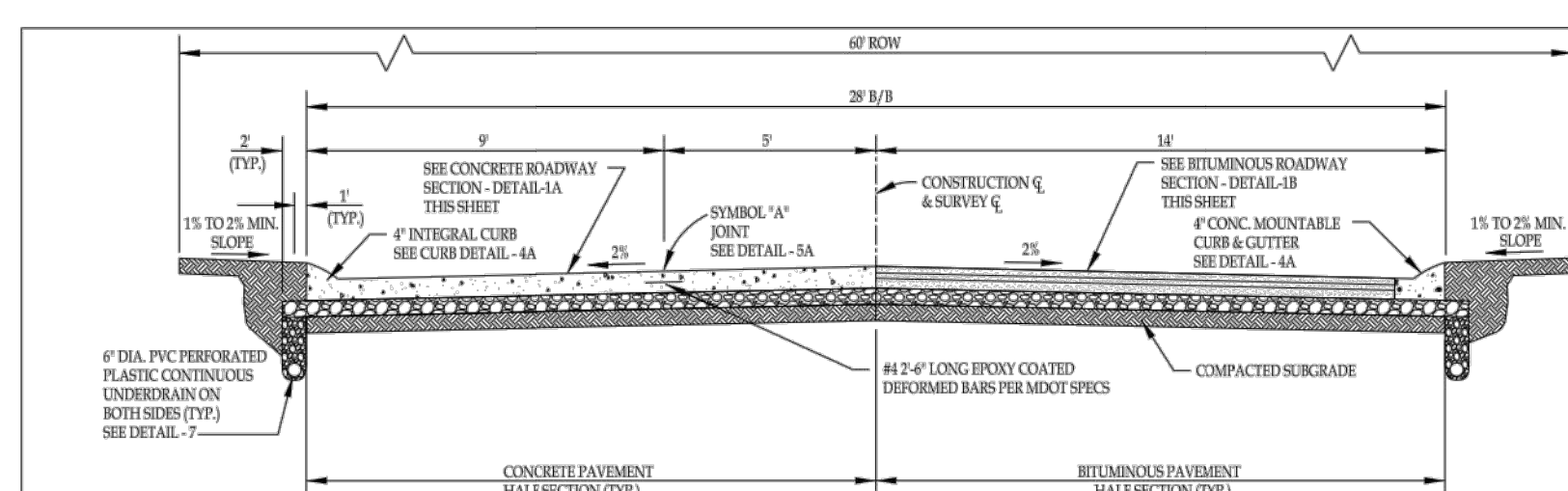
ENDEAVOR 2.0

DETAILS

C-510

PLOT DATE:

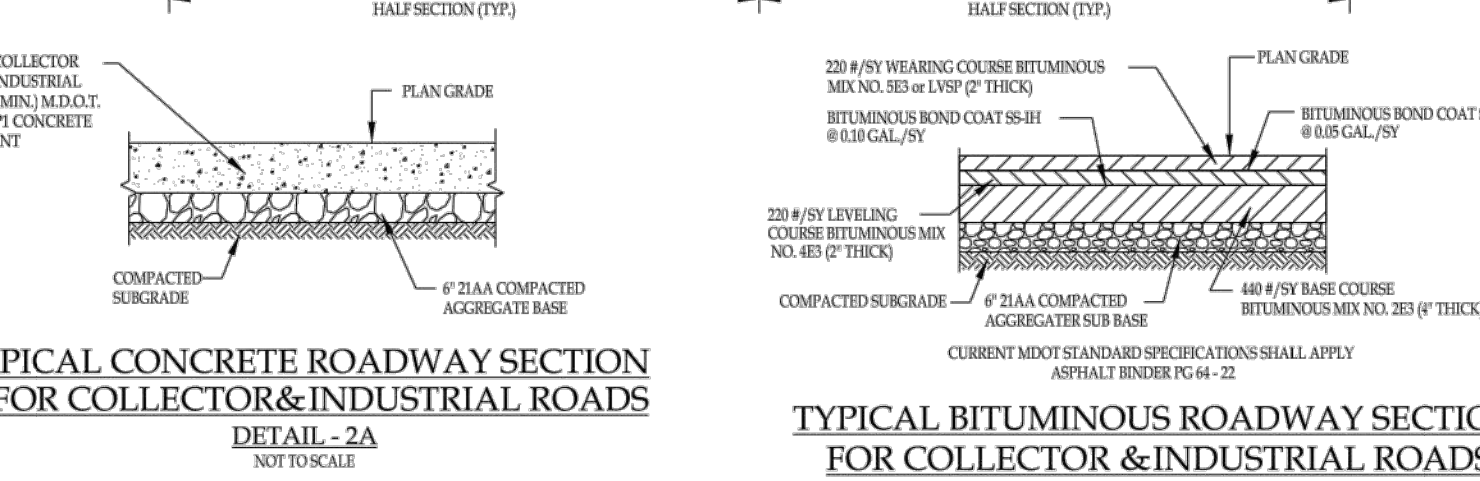
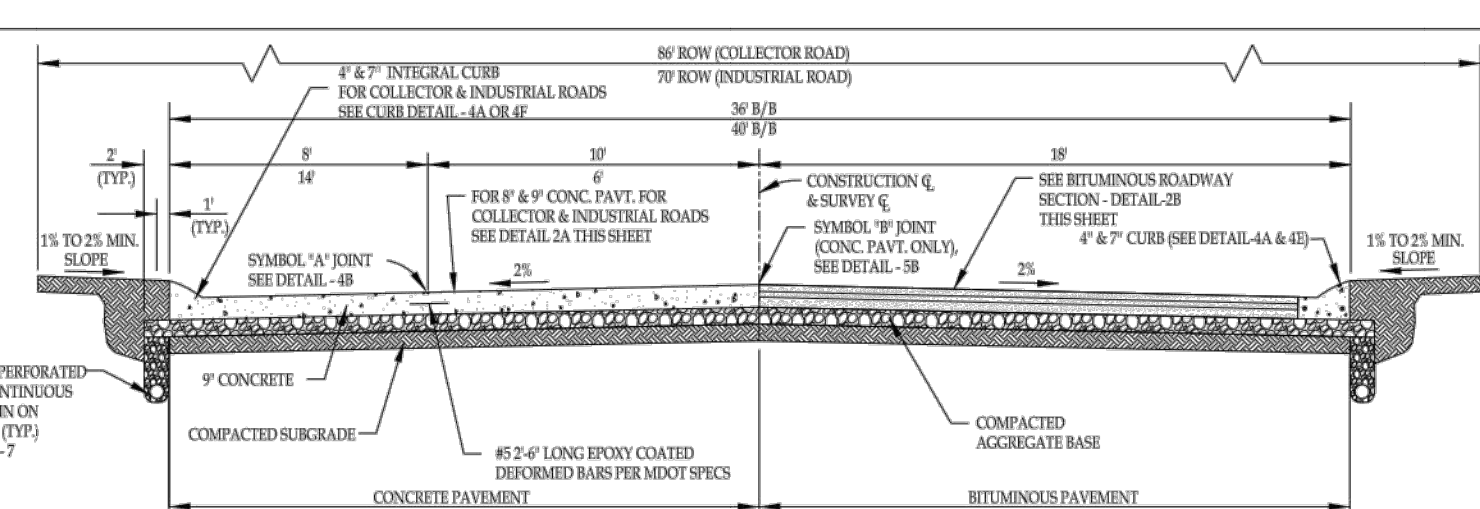




**TYPICAL CONCRETE ROADWAY SECTION FOR RESIDENTIAL ROAD**  
DETAIL - 1A  
NOT TO SCALE

**TYPICAL BITUMINOUS ROADWAY SECTION FOR RESIDENTIAL ROAD**  
DETAIL - 1B  
NOT TO SCALE

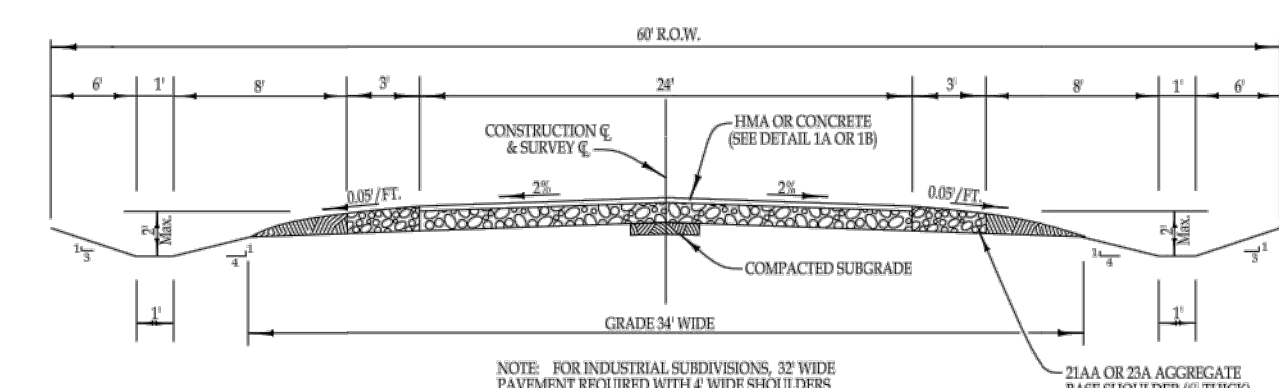
**TYPICAL CROSS SECTION DETAIL - 1**  
RESIDENTIAL ROAD PAVEMENT (28' B/B)



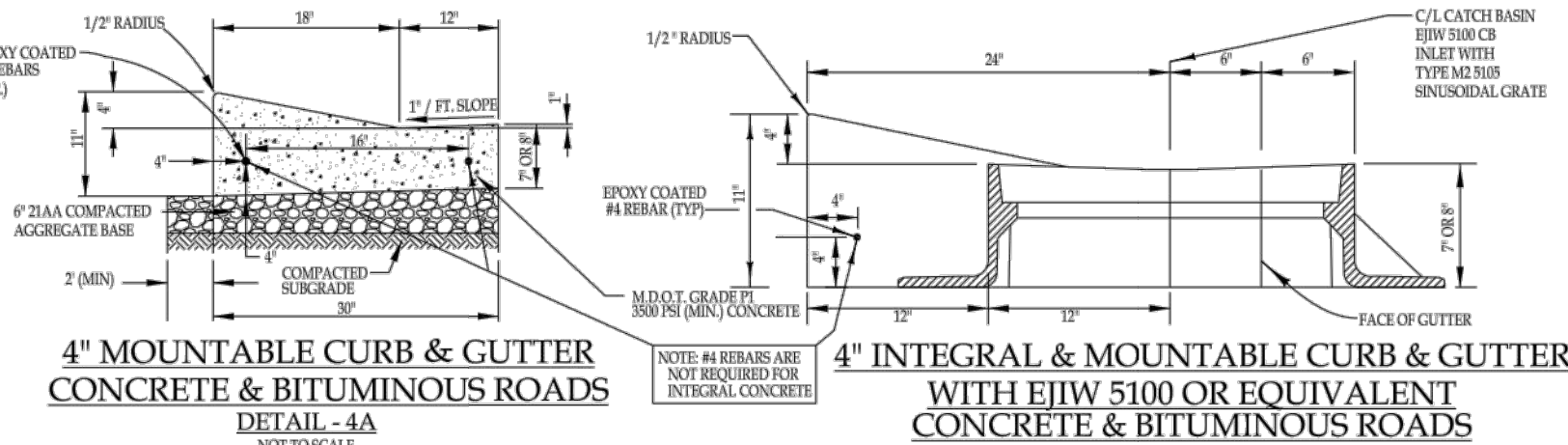
**TYPICAL CONCRETE ROADWAY SECTION FOR COLLECTOR & INDUSTRIAL ROADS**  
DETAIL - 2A  
NOT TO SCALE

**TYPICAL BITUMINOUS ROADWAY SECTION FOR COLLECTOR & INDUSTRIAL ROADS**  
DETAIL - 2B  
NOT TO SCALE

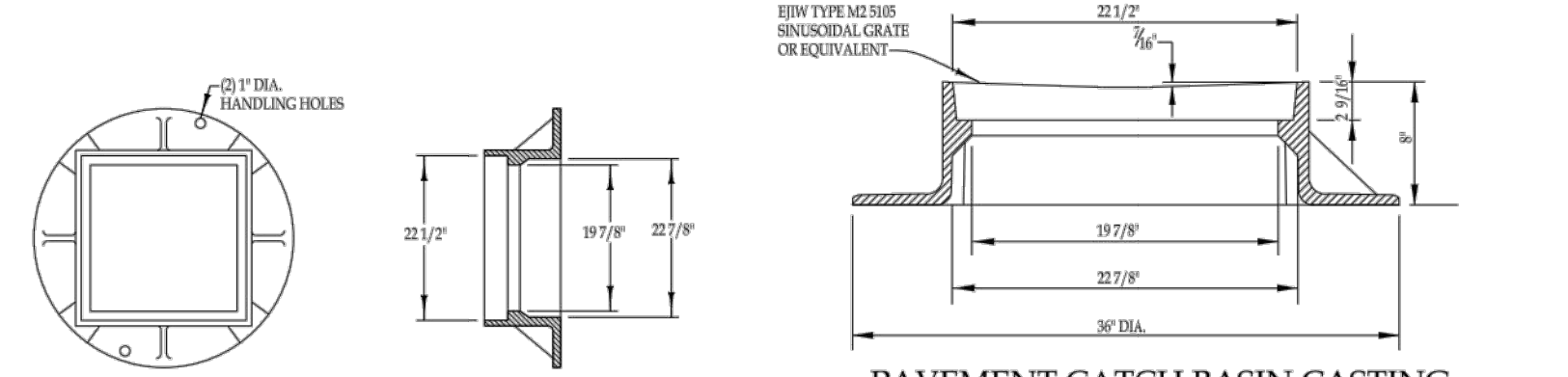
**TYPICAL CROSS SECTION DETAIL - 2**  
COLLECTOR AND INDUSTRIAL ROAD PAVEMENT (36' & 40' B/B)



**TYPICAL RESIDENTIAL ROAD CROSS SECTION DETAIL - 3**  
FOR OPEN DITCH CONSTRUCTION  
DETAIL - 3  
NOT TO SCALE

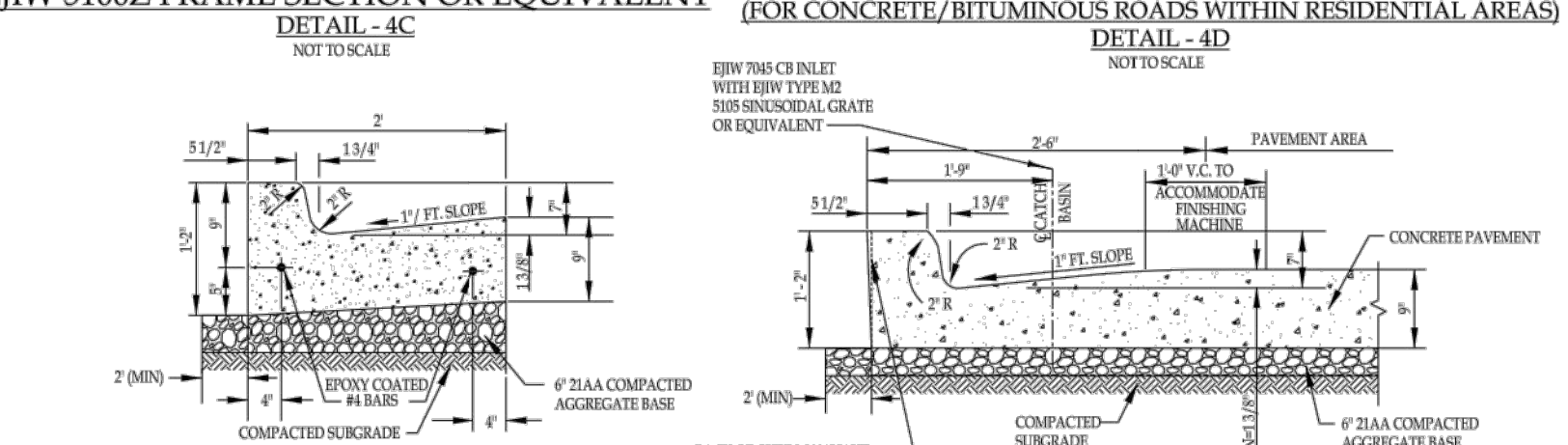


**4\"/>**



**EJIW 5100Z FRAME SECTION OR EQUIVALENT**  
DETAIL - 4C  
NOT TO SCALE

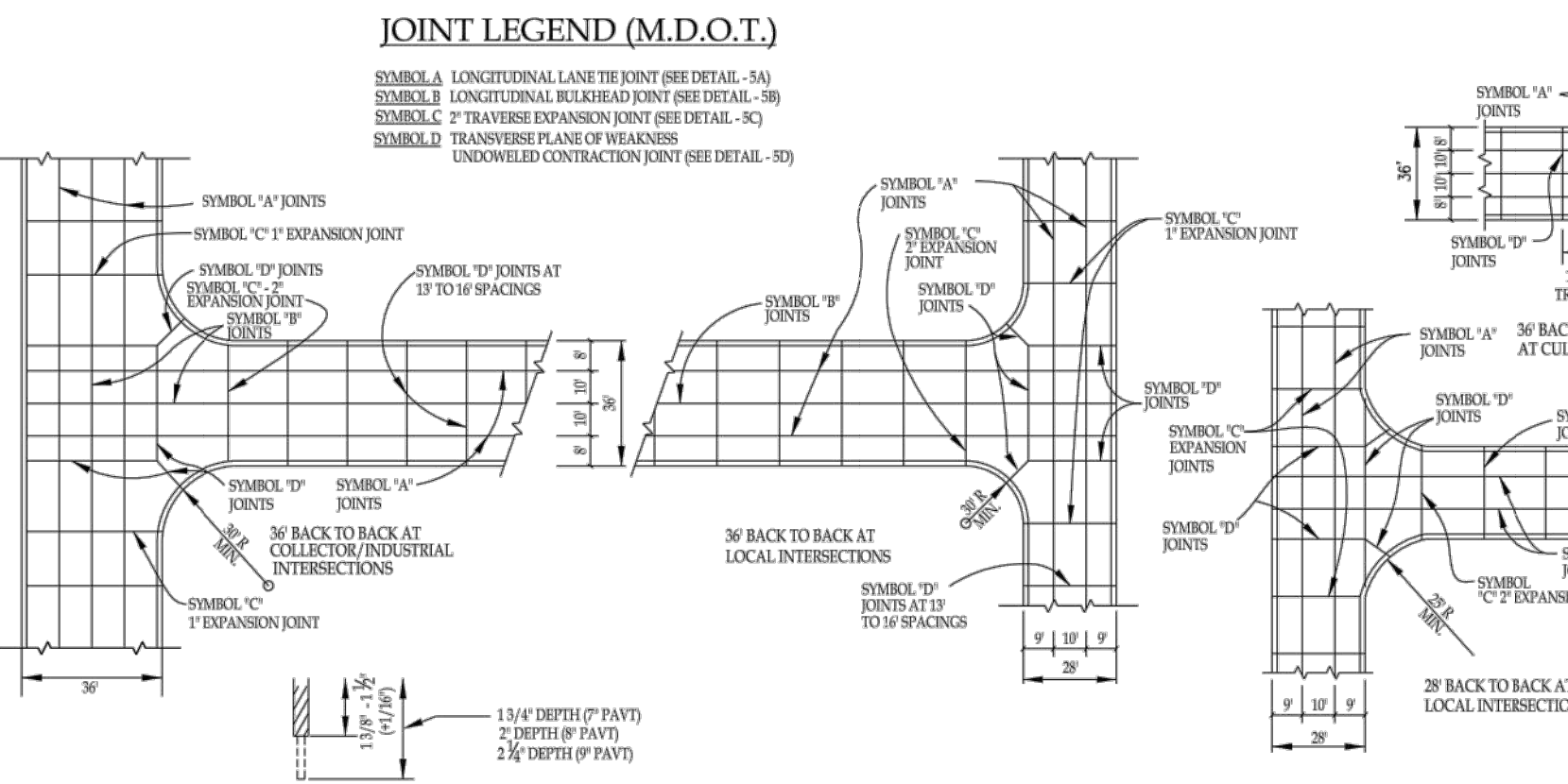
**PAVEMENT CATCH BASIN CASTING EJIW 5100 OR EQUIVALENT**  
DETAIL - 4D  
NOT TO SCALE



**7\"/>**

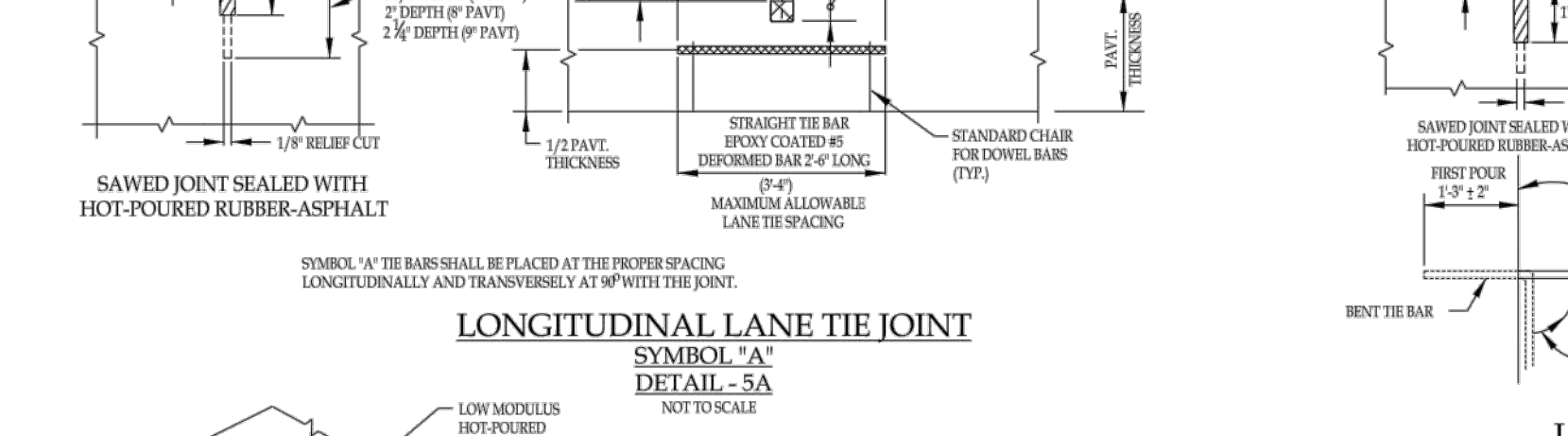


**CONCRETE CURB & GUTTER DETAIL - 4**  
NOT TO SCALE

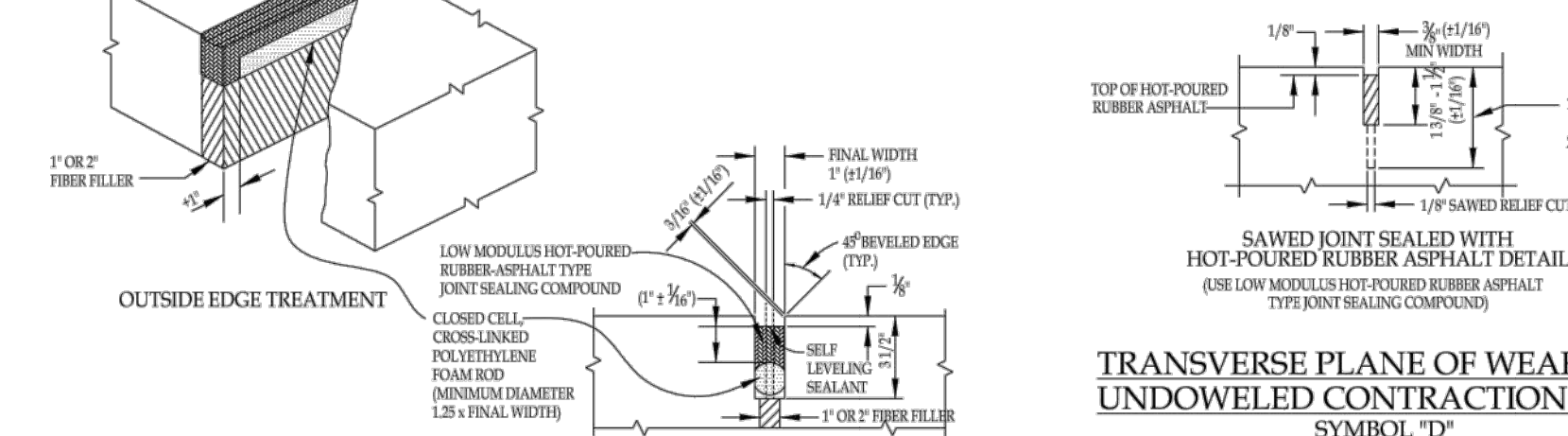


**JOINT LEGEND (M.D.O.T.)**

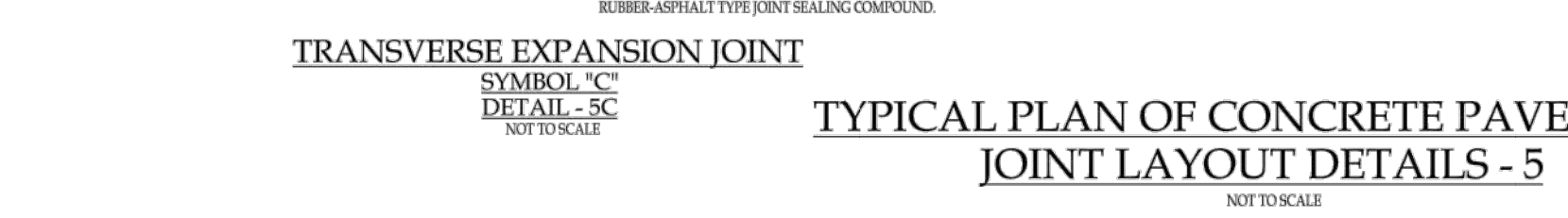
**TYPICAL PLAN OF CONCRETE PAVEMENT JOINT LAYOUT DETAILS - 5**  
NOT TO SCALE



**LONGITUDINAL LANE TIE JOINT**  
SYMBOL 'A'  
DETAIL - 5A  
NOT TO SCALE



**TRANSVERSE EXPANSION JOINT**  
SYMBOL 'C'  
DETAIL - 5C  
NOT TO SCALE



**TERMINAL BUTT JOINT**  
DETAIL - 6  
NOT TO SCALE

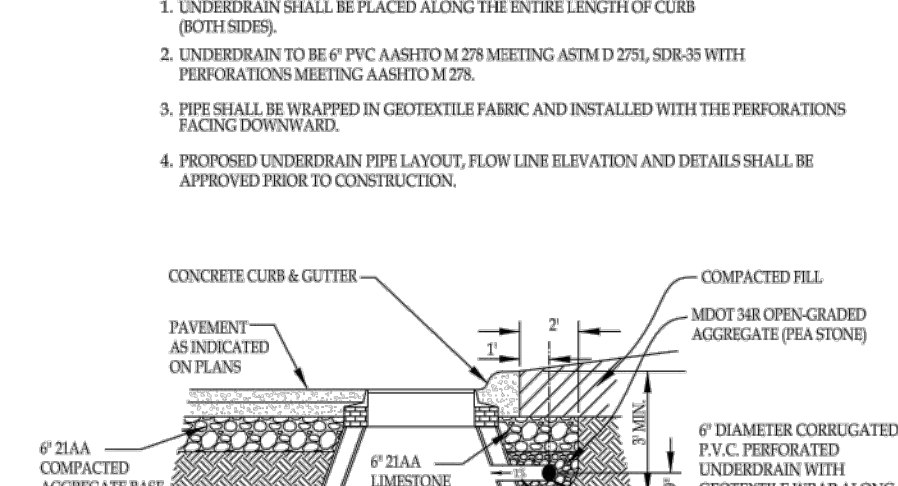
**PAVING NOTES**

- GENERAL NOTES**
- EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS. TREE ROOTS SHALL BE COMPLETELY REMOVED.
  - EXCAVATE TO THE DEPTH OF THE FROM SURGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
  - THE PAVEMENT SURGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY. THE PAVEMENT SURGRADE SHALL BE THOROUGHLY PROFILES IN THE PRESENCE OF A GEOTECHNICAL/PAVEMENT ENGINEER TO DETERMINE STABILITY. LOCKS OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH CLASS II SAND OR AS DIRECTED BY THE ENGINEER. ALL FILL MATERIAL AND BASE MATERIAL SHALL BE TESTED AND ITS COMPACTION AND STABILITY FOR ACCEPTANCE OF THE BASE MATERIAL AND PAVEMENT SHALL BE CERTIFIED BY SAID TESTING FIRM.
  - IF IN THE OPINION OF THE INSPECTOR/ENGINEER, FIELD CONDITIONS WARRANT ADDITIONAL TESTING, THE DEVELOPER SHALL ARRANGE FOR AND PAY FOR ALL REQUIRED ADDITIONAL TESTING.
  - 21AA AGGREGATE BASE SHALL BE COMPACTED TO ACHIEVE A 95% COMPACTION LEVEL (MOCKED PROCTOR - ASTM D 1557-01), THE BASE SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE BACK OF CURB OR THE PAVEMENT EDGE.
  - CONCRETE PAVEMENT TESTING SHALL BE REQUIRED FOR ALL PROJECTS.
  - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MACOMB COUNTY DEPARTMENT OF ROADS (MCDOR), AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.
  - FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL ARRANGE FOR ALL INSPECTION.
  - 1.0 INCH AND 2.0 INCH EXPANSION JOINTS SHALL BE INSTALLED PER MCDOR STANDARDS.
  - FIELD AREAS SHALL BE MACHINE COMPACTED TO UNIFORM LIFTS NOT EXCEEDING 4 INCHES THICK TO 95% OF THE MAXIMUM DRY DENSITY (MOCKED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.
  - IF UNDERDRAIN WRAPPED IN GEOTEXTILE FABRIC FIBER SHALL BE INSTALLED ON BOTH SIDES OF ALL ROADWAYS. (SEE DETAIL 7).
  - CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW BITUMINOUS PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, SUBJECT TO MCDOR APPROVAL, THE PLACEMENT OF THE FIBER SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED BY THE DEVELOPER. PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS.
- CONCRETE PAVEMENT**
- CONCRETE SHALL CONSIST OF PORTLAND CEMENT TYPE I(A) (AIR-ENTAINED WITH A MINIMUM CEMENT CONTENT OF SIX BAGS PER CUB. YARD), MINIMUM 10% COMPRESSIVE STRENGTH OF 3000 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES. PAVEMENT SHALL CONFORM TO M.D.O.T. GRADE PL.
  - ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WATER MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.
  - THE CONCRETE BATCH PLANT SHALL BE M.D.O.T. CERTIFIED WITH LOCATION APPROVED BY THE MACOMB COUNTY DEPARTMENT OF ROADS.
  - NO CONCRETE PAVING SHALL BE ALLOWED PRIOR TO MAY 1, OR AFTER NOVEMBER 1 (UNLESS APPROVED BY THE MACOMB COUNTY DEPARTMENT OF ROADS).
  - AIR TEMPERATURE AT POINT OF PLACEMENT, AWAY FROM ARTIFICIAL HEAT SHALL BE MINIMUM 50°F AND RISING.
  - TEMPERATURE OF CONCRETE AT TIME OF PLACEMENT SHALL BE BETWEEN 40°F AND 90°F.
  - CONCRETE PAVING MIXTURES SHALL MEET ALL PROVISIONS OF SECTION 601 OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND FOR THE COARSE AGGREGATE 404. SECTION 902. OBTAIN THE COARSE AGGREGATE FOR CONCRETE MIXTURES FROM NATURAL AGGREGATE SOURCES. THE ABSORPTION DETERMINED IN ACCORDANCE WITH ASTM C 127 SHALL NOT EXCEED 2.5%.
- BITUMINOUS PAVEMENT**
- BITUMINOUS MIXTURE SHALL CONSIST OF BASE COURSE - MOOT BITUMINOUS MIXTURE NO. 2B3 LAYING COURSE - MOOT BITUMINOUS MIXTURE NO. 4B3 WEARING COURSE - MOOT BITUMINOUS MIXTURE NO. 3B3 = 1.5\"/>

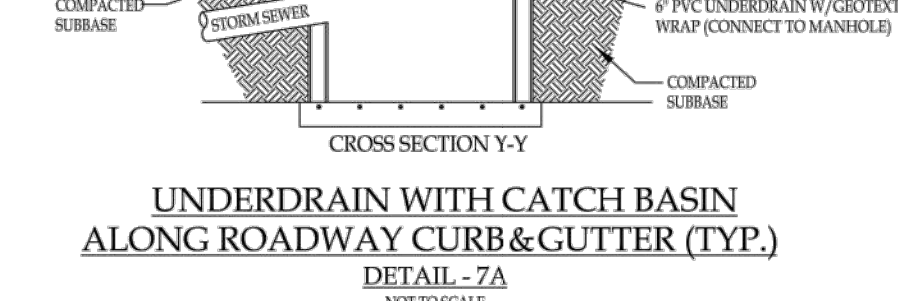
**PAVING NOTES**

- UNDERDRAIN NOTES**
- UNDERDRAIN SHALL BE PLACED ALONG THE ENTIRE LENGTH OF CURB (BOTH SIDES).
  - UNDERDRAIN TO BE 6\"/>

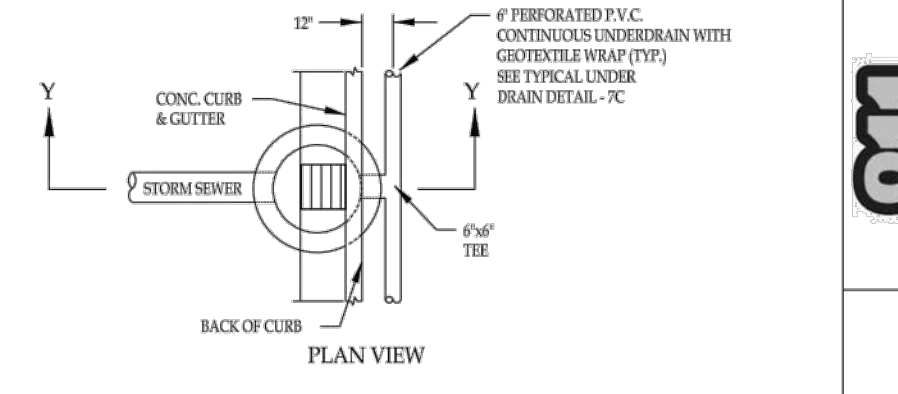
**UNDERDRAIN WITH CATCH BASIN ALONG ROADWAY CURB & GUTTER (TYP.)**



**UNDERDRAIN WITH CATCH BASIN ALONG ROADWAY CURB & GUTTER (TYP.)**  
DETAIL - 7A  
NOT TO SCALE



**6\"/>**



**TYPICAL UNDERDRAIN ALONG ROADWAY CURB & GUTTER SECTION**  
DETAIL - 7C  
NOT TO SCALE

PAVING STANDARD DETAILS

SCALE: NTS

DATE REVISED: MARCH 2018

Know what's below. Call before you dig.

MACOMB COUNTY DEPARTMENT OF ROADS

SHEET NO. 1 OF 2

FOR REFERENCE ONLY

DATE	REMARKS
1/3/22	Planning Comments
2/3/22	Planning Comments
4/2/22	Issued for Permit
6/30/22	Macomb SESC Comments
7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.20  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

TACO BELL

17669 23 Mile Road  
Macomb, MI 48042

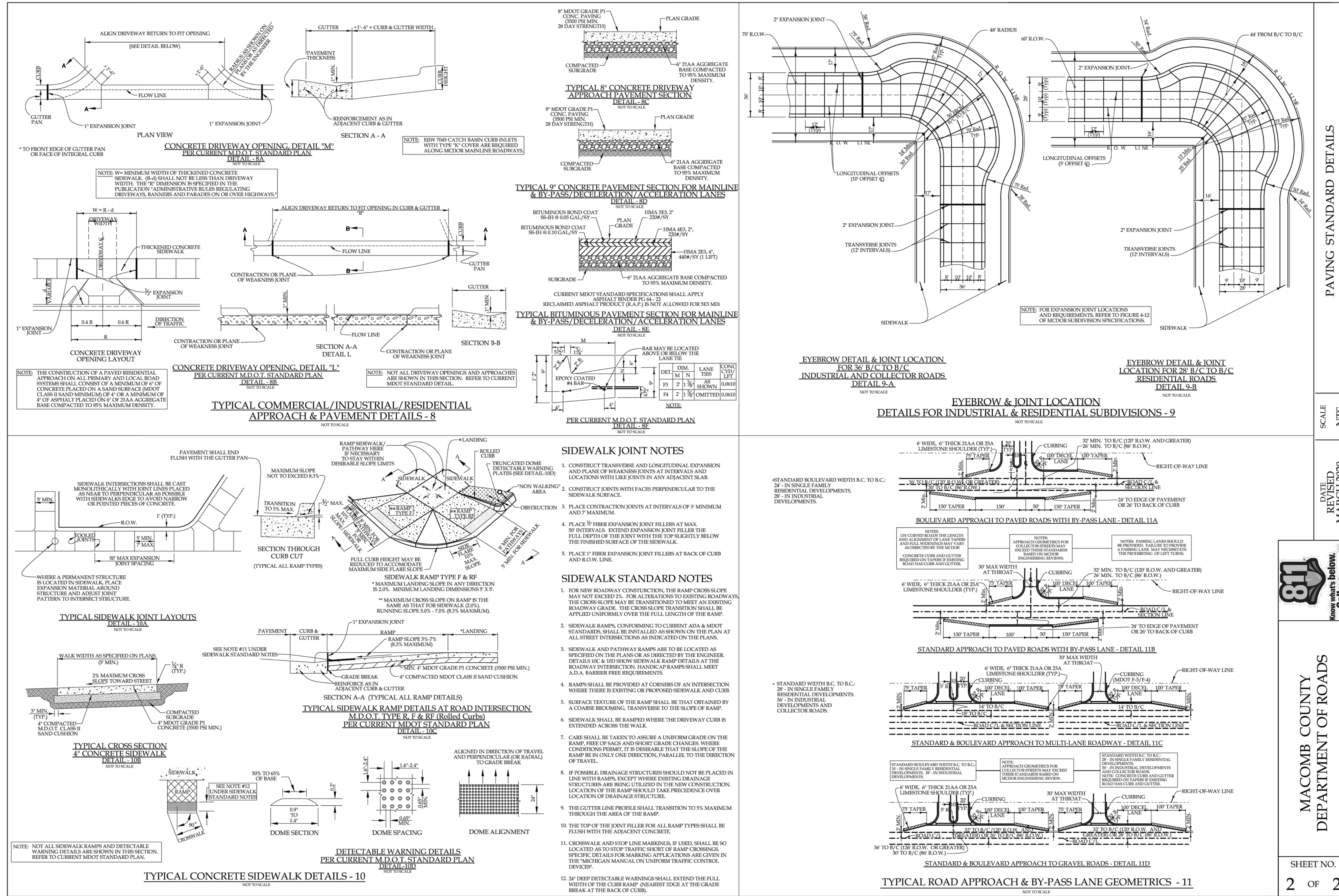


ENDEAVOR 2.0

MCDR  
PAVING DETAILS

C-511

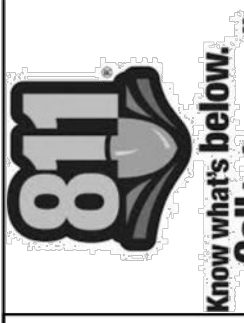
PLOT DATE:



PAVING STANDARD DETAILS

SCALE: NTS

DATE REVISOR: MARCH 2020



MACOMB COUNTY DEPARTMENT OF ROADS

SHEET NO. 2 OF 2

FOR REFERENCE ONLY

DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit
4 6/30/22	Macomb SESC Comments
5 7/29/22	Macomb Township Comments

CONTRACT DATE: 11.15.21  
BUILDING TYPE: END. MED20  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 315390  
STORE NUMBER: 457226  
PA/PM: SM  
DRAWN BY: EA  
JOB NO.: 2021088.48

TACO BELL

17669 23 Mile Road  
Macomb, MI 48042



ENDEAVOR 2.0

MCDR PAVING DETAILS

C-512

PLOT DATE:

LANDSCAPE NOTES & PLANTING SPECIFICATIONS

**SCOPE OF WORK**

- THIS WORK SHALL CONSIST OF PERFORMING CLEARING AND GRUBBING, SOIL PREPARATION, FINISH GRADING, PLANTING AND DRAINAGE, INCLUDING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT.
- QUANTITY TAKEOFF IS SUPPLIED FOR CONTRACTOR'S ASSISTANCE ONLY. CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ALL PLANT MATERIALS AS PER PLAN.
- NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR WITHIN EASEMENT OR RIGHT-OF-WAY LIMITS.

**PRESERVATION/PROTECTION (IF APPLICABLE)**

- CONTRACTOR SHALL MAINTAIN AND PRESERVE TREES AND SHRUBS NOT BEING REMOVED, INCLUDING THEIR ROOTS. TREE PROTECTION FENCING SHALL BE USED AT THE DRIP LINE OF ALL TREES AND SHRUBS WITHIN 50 FEET OF CONSTRUCTION EXCEPT AS SHOWN ON PLAN. FENCING SHALL REMAIN IN PLACE UNTIL FINAL PLANT INSPECTION FOLLOWING CONSTRUCTION. MATERIALS SHALL NOT BE STOCKPILED WITHIN THIS DEFINED AREA AND VEHICLES AND OTHER EQUIPMENT SHALL BE OPERATED TO AVOID SOIL COMPACTION.
- FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA EQUAL TO TWICE THE TREE CIRCUMFERENCE (MEASURED 6" ABOVE THE GROUND LINE IN INCHES) EXPRESSED IN FEET. (EXAMPLE: A CIRCUMFERENCE OF 10" WOULD HAVE A NO CUT ZONE OF 20 FEET IN ALL DIRECTIONS FROM THE TREE). THIS SHOULD APPLY TO UTILITY SERVICES, IF FEASIBLE. THE ONLY EXCEPTION TO THIS REQUIREMENT WILL BE THOSE SPECIFICALLY ALLOWED BY THE LANDSCAPE ARCHITECT, SPECIFICATIONS OR AS INDICATION ON THE PLANS.
- TREE TRUNKS AND EXPOSED ROOTS DAMAGED DURING EQUIPMENT OPERATIONS SHALL BE TREATED IN ACCORDANCE WITH THE ARBOR CULTURAL STANDARDS OF THE CITY.

**PLANT MATERIALS**

- GENERAL - ALL MATERIALS SHALL BE OF ITS KIND AVAILABLE AND SHALL HAVE BEEN GROWN IN A CLIMATE SIMILAR TO THAT ON SITE.
- PLANTS - ALL PLANTS SHALL BE HEALTHY, OF NORMAL GROWTH, WELL ROOTED, FREE FROM DISEASE AND INSECTS. QUALITY AND SIZE OF PLANT MATERIAL SHALL CONFORM TO ANSI Z60.1 "AMERICAN STANDARDS FOR NURSERY STOCK".
- VARIETIES AND SIZES OF PLANTS SHALL BE AS SHOWN ON DRAWINGS.
- PLANTS SHALL BE IN A HEALTHY, VIGOROUS CONDITION, FREE OF DEAD OR BROKEN BRANCHES, SCARS THAT ARE NOT COMPLETELY HEALED, FROST CRACKS, DISFIGURING KNOTS, BROKEN OR ABRADED BARK, REDUNDANT LEADERS OR BRANCHES, OR ABERRATIONS OF ANY KIND. PLANTS SHALL NOT HAVE MULTIPLE LEADERS, UNLESS THIS IS THE NATURAL FORM.
- BALLED AND BURLAPPED (B&B) PLANTS SHALL BE DUG WITH A FIRM ROOT BALL OF NATURAL EARTH, OF A SIZE IN PROPORTION TO THE PLANT'S SIZE, AS MEASURED BY CALIPER, HEIGHT, OR SPREAD. BALLED AND BURLAPPED PLANTS SHALL BE HANDLED ONLY BY THE ROOT BALL, NOT BY THE TRUNK OR BRANCHES, AS THIS MAY BREAK OR LOOSEN THE ROOT BALL AND DAMAGE THE ROOT SYSTEM. CONTAINER PLANTS SHALL HAVE BEEN ESTABLISHED FOR A MINIMUM OF ONE FULL GROWING SEASON IN THEIR CONTAINERS BEFORE INSTALLATION. CONTAINER PLANTS SHALL BE HANDLED ONLY BY THE CONTAINER, NOT BY THE STEMS OR BRANCHES, AS THIS MAY PULL THE PLANT OUT OF THE CONTAINER AND BREAK OR LOOSEN THE ROOT BALL AND DAMAGE THE ROOT SYSTEM.
- PLANTS SHALL BE PROTECTED FROM DRYING OUT DURING SHIPPING WITH TARPULINS OR OTHER COVERINGS. PLANTS SHALL BE PROTECTED FROM DRYING OUT AFTER DELIVERY BY PLANTING IMMEDIATELY; IF THIS IS NOT POSSIBLE, THE ROOT BALL SHALL BE COVERED WITH PEAT MOSS OR EARTH, AND WATERED FREQUENTLY TO KEEP IT MOIST UNTIL PLANTING.
- DO NOT HANDLE, MOVE, BIND, TIE OR OTHERWISE TREAT PLANTS SO AS TO DAMAGE THE ROOT BALL, ROOTS, TRUNK, OR BRANCHES IN ANY WAY.

**TOPSOIL**

- TOPSOIL HAS BEEN (OR WILL BE) STOCKPILED FOR REUSE IN LANDSCAPE WORK. IF QUANTITY OF STOCKPILED TOPSOIL IS INSUFFICIENT, PROVIDE ADDITIONAL TOPSOIL AS REQUIRED TO COMPLETE LANDSCAPE WORK. IMPORTED TOPSOIL SHALL CONSIST OF LOOSE, FRAGILE, LOAMY TOPSOIL WITHOUT ADMIXTURE OF SUBSOIL OR REFUSE. ACCEPTABLE TOPSOIL SHALL CONTAIN NOT LESS THAN 3 PERCENT NOR MORE THAN 20 PERCENT ORGANIC MATTER.
- PLANTING BACKFILL FOR PARKING LOT ISLANDS SHALL CONSIST OF A HOMOGENEOUS MIXTURE OF 3 PARTS TOPSOIL TO ONE PART SPHAGNUM PEAT INSTALLED OVER A 6" THICKNESS OF NO. 57 AGGREGATE.

**SOIL CONDITIONING**

- OBTAIN LABORATORY ANALYSIS OF STOCKPILED AND IMPORTED TOPSOIL COMPLETE WITH RECOMMENDATIONS FOR SOIL AMENDMENT.
- BEFORE MIXING, CLEAN TOPSOIL OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEEOUS MATERIALS HARMFUL OR TOXIC TO PLANT GROWTH.
- MIX SPECIFIED SOIL AMENDMENTS AND FERTILIZERS WITH TOPSOIL AT RATES SPECIFIED BY THE LAB REPORT. DELAY MIXING OF FERTILIZER IF PLANTING WILL NOT FOLLOW PLACING OF PLANTING SOIL WITHIN A FEW DAYS.
- FOR PLANTING BEDS AND LAWNS, MIX PLANTING SOIL EITHER PRIOR TO PLANTING OR APPLY ON SURFACE OF TOPSOIL AND MIX THOROUGHLY BEFORE PLANTING. MIX LIME WITH DRY SOIL PRIOR TO MIXING OF FERTILIZER.
- PREVENT LIME FROM CONTACTING ROOTS OF ACID-LOVING PLANTS.
- APPLY PHOSPHORIC ACID FERTILIZER (OTHER THAN THAT CONSTITUTING A PORTION OF COMPLETE FERTILIZERS) DIRECTLY TO SUBGRADE BEFORE APPLYING PLANTING SOIL AND TILLING.

**PLANTING SOIL**

- PLANTING SOIL MIX SHALL BE CLEAR OF ALL STONES AND DEBRIS 1" OR LARGER, AND CONSIST OF THE FOLLOWING: 25% ORGANIC COMPOST, 75% ACCEPTABLE TOPSOIL.

**OTHER MATERIALS**

- BED EDGING - EDGING SHALL BE 4" STEEL EDGING WITH THREE (3) METAL ANCHOR STAKES PER 20 FOOT SECTION. ALL MASS PLANTING BEDS SHALL HAVE EDGING PLACED BETWEEN MULCH AREA AND ANY ADJACENT TURF AREA.
- MULCH: ORGANIC MULCH FREE FROM DELETERIOUS MATERIALS AND SUITABLE FOR TOP DRESSING OF TREES, SHRUBS, OR PLANTS AND CONSISTING OF THE FOLLOWING:
  - NON-DRYED, DOUBLE SHREDDED HARDWOOD SHALL BE INSTALLED IN ALL OTHER LANDSCAPE BEDS AT A DEPTH OF 3 INCHES.

**GENERAL WORK PROCEDURES**

- LANDSCAPE WORK SHALL BE ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE CONSTRUCTION AND PLANTING IN THE MICHIGAN STANDARDIZED LANDSCAPE SPECIFICATIONS (ASLA) AND ANY LOCAL LANDSCAPE ORDINANCES.
- CONTRACTOR SHALL OBTAIN A COPY OF LOCAL ORDINANCES REGARDING ACCEPTABLE PLANT AND PLANTING DETAILS AND ABIDE BY THOSE ORDINANCES AND DETAILS.
- ENGINEER RESERVES THE RIGHT TO REJECT ALL PLANT MATERIAL DEEMED NOT ACCEPTABLE.
- ANY PROPOSED PLANT SUBSTITUTIONS SHALL BE EQUIVALENT IN FORM, HABIT, STRUCTURE, BRANCHING AND LEAF TYPE AND MUST BE ISSUED TO THE LANDSCAPE ARCHITECT FOR APPROVAL, IN WRITING, PRIOR TO INSTALLATION.

**WEEDING**

- BEFORE AND DURING PRELIMINARY GRADING AND FINISH GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

**PLANTING**

- POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE OWNER BEFORE EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
- PLANTING PITS SHALL BE AS PER DETAILS.
- PREPARED SOIL SHALL BE TAMPED FIRMLY AT BOTTOM OF PIT. FILL WITH PLANTING SOIL AROUND BALL OF PLANT. COMPLETE BACKFILLING AND WATER THOROUGHLY.
- EACH TREE AND SHRUB SHALL RECEIVE THE LANDSCAPER'S BIONUTRITION (3-0-3) GRANULAR WITH MYCORRHIZAL TECHNOLOGY FERTILIZER OR APPROVED OTHER, APPLY FERTILIZER PER MANUFACTURER'S SPECIFICATIONS.
- WATER IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED.
- INSTALL BED EDGING AND MULCH PER MATERIALS SPECIFICATION AND DETAILS.
- REMOVE ALL SALES TAGS, STRINGS, STRAPS, WIRE, ROPE OR OTHER MATERIALS THAT MAY INHIBIT PLANT GROWTH BOTH ABOVE AND BELOW THE SURFACE OF THE SOIL.
- REMOVE ANY BROKEN, SUCKERING, DISEASED, CRISSCROSSED OR AESTHETICALLY DISPLEASING BRANCHES BACK TO LIVE LEADER OR SIDE LATERAL WITH A FLUSH CUT.

**FINISH GRADING**

- ALL AREAS WILL BE GRADED BY THE CONTRACTOR TO SUBSTANTIALLY PLUS/MINUS 0.1 FOOT OF FINISH GRADE.
- ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN, UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE. SOIL AREAS ADJACENT TO THE BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS.
- ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER.
- PARKING LOT ISLAND SHALL BE BACKFILLED AS PART OF THIS CONTRACT.

**GROUND COVER**

- SPACING AND VARIETY OF GROUND COVER SHALL BE AS SHOWN ON DRAWINGS.
- MULCH GROUND COVER WITH 2" THICKNESS OF SPHAGNUM PEAT.
- IMMEDIATELY AFTER PLANTING GROUND COVER, CONTRACTOR SHALL THOROUGHLY WATER GROUND COVER.
- ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT BEFORE FINAL LANDSCAPE INSPECTION. GROUND COVER AREAS SHALL BE WEDED PRIOR TO APPLYING PRE-EMERGENT. PRE-EMERGENT TO BE APPLIED AS PER MANUFACTURER'S RECOMMENDATION.

**GUARANTEE**

- CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF PROJECT ACCEPTANCE BY THE OWNER.

**CLEANUP**

- UPON THE COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. AN 'ACCEPTABLE CONDITION' SHALL BE AS DEFINED AND APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

**IRRIGATION**

- CONTRACTOR SHALL PROVIDE & INSTALL AN IRRIGATION SYSTEM TO PROVIDE 100% COVERAGE OF THE SITE.
- IRRIGATED AREAS WITHIN 5 FEET OF BUILDING WALLS SHALL BE IRRIGATED BY DRIP IRRIGATION OR SIMILAR. CONTRACTOR SHALL ENSURE BUILDING WALLS AND WINDOWS WILL NOT BE DAMAGED OR STAINED BY IMPROPER IRRIGATION INSTALLATION OR POOR SELECTION OF FIXTURES.
- SYSTEM SHALL INCLUDE ALL SPRINKLER FIXTURES, DRIP TUBING, PIPING, VALVES, WIRING AND CONTROLS TO PROVIDE A COMPLETE FUNCTIONAL SYSTEM THAT SHALL COMPLY WITH CITY CODE.
- IRRIGATION CONTRACTOR SHALL PROVIDE A METHOD FOR WINTERIZATION. WINTERIZATION SHALL BE PERFORMED BY CONTRACTOR UPON COMPLETION IF SYSTEM IS INSTALLED BETWEEN NOVEMBER 1 AND MARCH 31.
- PRIOR TO UPDATING THE IRRIGATION SYSTEM, A CERTIFIED IRRIGATION DESIGNER SHALL PROVIDE SHOP DRAWINGS TO ENGINEER FOR APPROVAL.
- UPON APPROVAL OF SHOP DRAWINGS, THE UPDATED IRRIGATION SYSTEM SHALL BE APPROVED BY OWNER FOR FINAL ACCEPTANCE.

**MAINTENANCE**

(MAINTENANCE PERIOD TO COMMENCE AFTER FINAL INSPECTION.)

- MAINTENANCE PERIOD FOR THIS CONTRACT SHALL BE 90 CALENDAR DAYS COMMENCING AFTER FINAL INSPECTION OF CONSTRUCTION.
- MAINTAIN TREES, SHRUBS AND OTHER PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED.
- MAINTAIN LAWNS BY WATERING, MOWING, TRIMMING, AND OTHER OPERATIONS SUCH AS ROLLING, REGRADING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
- MAINTAIN THE LANDSCAPING BY KEEPING ALL PLANTS DISEASE-FREE AND PLANTING BEDS GROOMED, EXCEPT IN NATURALLY OCCURRING VEGETATION AREAS.
- REPLACE ANY REQUIRED PLANTING(S), WHICH SEVERELY DECLINE OR DIE AFTER THE DATE OF PLANTING. SUCH REPLACEMENT SHALL OCCUR DURING THE NEXT APPROPRIATE PLANTING SEASON.

**SODDING**

- SOD SHALL BE FIRST GRADE CERTIFIED BLENDS OF THE FOLLOWING SPECIES PER HARDINESS ZONE CONTAINING NOT MORE THAN 30 PERCENT OF OTHER GRASSES AND CLOVERS, AND FREE FROM ALL NOXIOUS WEEDS.
  - ZONES 3, 4 & 5: APPROVED BLUE GRASS BLEND
  - ZONE 6: APPROVED FESCUE BLEND
  - ZONES 7 & 8: APPROVED BERMUDA BLEND
  - ZONES 9 & 10: APPROVED ST AUGUSTINE FLORATAM BLEND
- SOD SHALL BE RECENTLY MOWED TO A HEIGHT OF NOT LESS THAN 3 INCHES. IT SHALL BE CUT INTO STRIPS OF NOT LESS THAN 3 FEET AND NOT OVER 6 FT. WITH A UNIFORM WIDTH OF NOT OVER 24 INCHES.
- SOD SHALL BE CUT TO A DEPTH EQUAL TO THE GROWTH OF THE FIBROUS ROOTS BUT IN NO CASE LESS THAN 1 INCH.
- SOD SHALL BE DELIVERED TO THE JOB WITHIN 24 HOURS AFTER BEING CUT AND SHALL BE INSTALLED WITHIN 48 HOURS AFTER BEING CUT.
- BEFORE SOD IS PLACED, THE SOD BED WILL HAVE BEEN EXCAVATED TO SUCH A DEPTH THAT WHEN THE SOD IS IN PLACE THE TOP OF THE SOD WILL BE FLUSH WITH THE SURROUNDING GRADE.
- NO SOD SHALL BE PLACED WHEN THE TEMPERATURE IS BELOW 32 DEGREES F. NO FROZEN SOD SHALL BE PLACED NOR SHALL ANY SOD BE PLACED ON FROZEN SOIL. WHEN SOD IS PLACED BETWEEN THE DATES OF JUNE 1ST AND OCTOBER 15TH, IT SHALL BE COVERED IMMEDIATELY WITH A STRAW MULCH 1 INCH THICK (LOOSE MEASUREMENT).
- AFTER LAYING, THE SOD SHALL BE WATERED THOROUGHLY AND TAMPED WITH APPROVED SOD TAMPERS SUFFICIENTLY TO BRING THE SOD INTO CLOSE CONTACT WITH THE SOD BED AND INSURE TIGHT JOINTS BETWEEN THE SECTIONS OR STRIPS.
- THE CONTRACTOR SHALL KEEP ALL SODDED AREAS INCLUDING SUBGRADE, THOROUGHLY MOIST FOR 30 DAYS AFTER SODDING.
- THE CONTRACTOR SHALL REPAIR ANY AREAS DAMAGED FOLLOWING INSTALLATION AS DIRECTED BY THE ENGINEER. SOD SHALL BE IN PLACE AT LEAST 30 DAYS BEFORE FINAL ACCEPTANCE.

**PLANTING SCHEDULE**

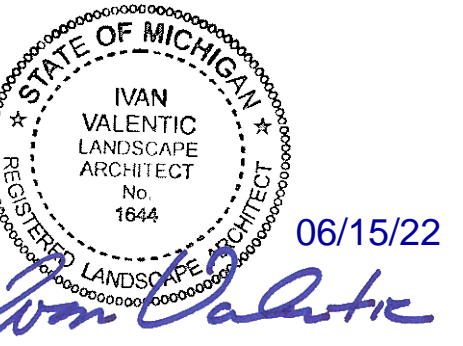
- ALL PLANTING IS RECOMMENDED TO BE DONE WITHIN THE FOLLOWING DATES. WHEN PLANTING OUTSIDE THESE DATES, WRITTEN DOCUMENTATION SHALL BE PROVIDED THAT SURVIVAL OR REPLACEMENT WILL BE ENSURED. NO PLANTING SHALL BE DONE IN FROZEN SOIL.

NORMAL PLANTING SEASONS	SPRING	FALL
ALL TREES AND SHRUBS	MARCH 15-MAY 15	OCTOBER 1-DECEMBER 1
EVERGREENS	APRIL 1-MAY 15	OCTOBER 1-NOVEMBER 15
GROUNDCOVERS	APRIL 1-JUNE 1	WHEN SOD IS WORKABLE
SEED AND MULCH	APRIL 1-MAY 15	OCTOBER 1-NOVEMBER 15

**DETENTION BASIN SEEDING**

- GRASS SEED SHALL BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH THE ASSOCIATION OF OFFICIAL SEED ANALYSTS' "RULES FOR TESTING SEEDS" FOR PURITY AND GERMINATION TOLERANCES.
- ALL AREAS TO BE SEEDED SHALL RECEIVE NO LESS THAN FIVE POUNDS OF SEED PER ONE THOUSAND SQUARE FEET. APPLY SEED AND PROTECT WITH STRAW MULCH AS REQUIRED FOR NEW LAWNS. GRASS SEED MIX SHALL CONSIST OF THE FOLLOWING:

PROPORTION	NAME	MIN.% GERM.	MIN.% PURE SEED	MAX.% WEED SEED
30%	KENTUCKY BLUEGRASS (POA PRATENSIS)	80	85	0.50
40%	KENTUCKY 31 FESCUE (FESTUCA ARUNDINACEA VAR. KY 31)	85	98	0.50
30%	PERENNIAL RYE GRASS (LOLIUM PEREUNE)	90	98	0.50



DATE	REMARKS
1 3/8/22	Planning Comments
2 3/21/22	Planning Comments
3 4/21/22	Issued for Permit

CONTRACT DATE: 11.15.21  
 BUILDING TYPE: END. MED20  
 PLAN VERSION: MARCH 2021  
 BRAND DESIGNER: DICKSON  
 SITE NUMBER: 315390  
 STORE NUMBER: 457226  
 PA/PM: SM  
 DRAWN BY.: EA  
 JOB NO.: 2021088.48

**TACO BELL**

17669 23 Mile Road  
 Macomb, MI 48042



ENDEAVOR 2.0

LANDSCAPE NOTES

L-001

PLOT DATE:



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**TACO BELL**  
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LANDSCAPE PLAN  
**L-102**

PLOT DATE:

**PLANT LIST**

Symbol	Botanical Name	Common Name	Qty.	Min. Size	Condition	Remarks
Bx	Buxus 'Green Velvet'	Green Velvet Boxwood	62	24" H Min.	B&B	3' o/c
Gb	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	3	2.5" Cal.	B&B	Specimen
Gt	Gleditsia triacanthos f. inermis 'Skycole'	Skyline Thornless Honeylocust	3	2.5" Cal.	B&B	Specimen
Fg	Festuca glauca	Blue Fescue	71	No. 2	Cont.	Per Plan
Hb	Hemerocallis 'Going Bananas'	Going Bananas Daylily	137	No. 1	Cont.	1.5' o/c
Jh	Juniperus horizontalis 'Blue Chip'	Blue Chip Juniper	16	24" Spread, No. 3	Cont.	4' o/c
Js	Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper	7	5' H	B&B	Specimen
Nc	Nepeta x 'Cat's Pajamas'	Cat's Pajamas Catmint	59	No. 2	Cont.	2' o/c
Sn	Spiraea nipponica 'Wedding Cake'	Wedding Cake Spirea	38	24" H Min.	Cont.	3.5' o/c
Te	Thuja occidentalis 'Smaragd'	Emerald Arborvitae	18	5' H	B&B	4' o/c
Tr	Thuja occidentalis 'Rheingold'	Rheingold Arborvitae	0	24" H Min.	B&B	3' o/c
Yf	Yucca filamentosa 'Color Guard'	Color Guard Yucca	11	No. 5	Cont.	Per Plan

- LANDSCAPE NOTES**
- MULCH PER LANDSCAPE SPECIFICATIONS.
  - ALL AREAS NOT TO BE PAVED OR MULCHED BEDS SHALL BE SODDED AND IRRIGATED.
  - CONTRACTOR SHALL PROVIDE & INSTALL AN IRRIGATION SYSTEM TO PROVIDE 100% COVERAGE OF THE SITE.

**LANDSCAPE LEGEND**

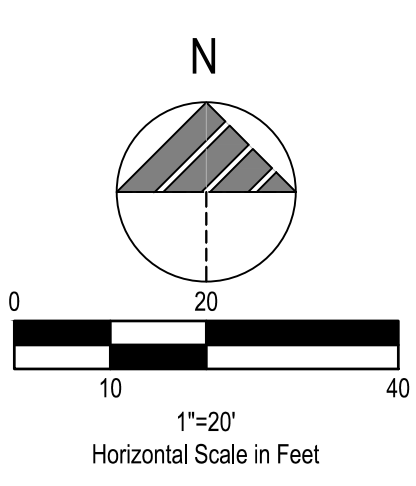
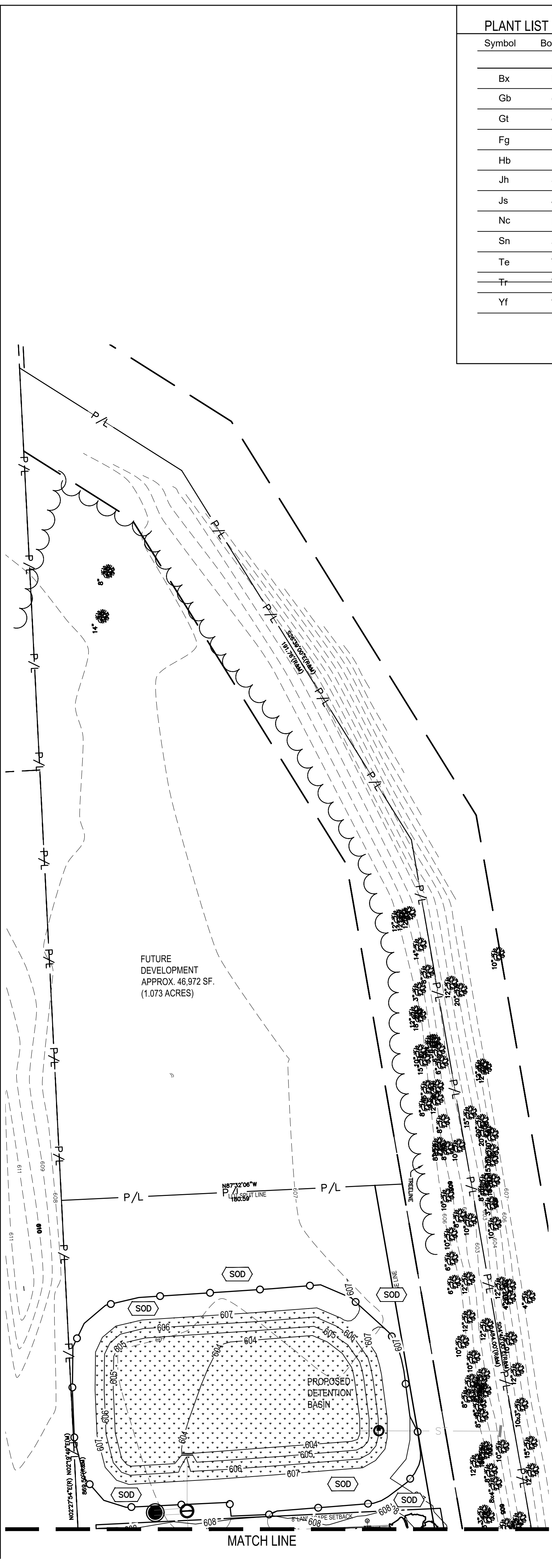
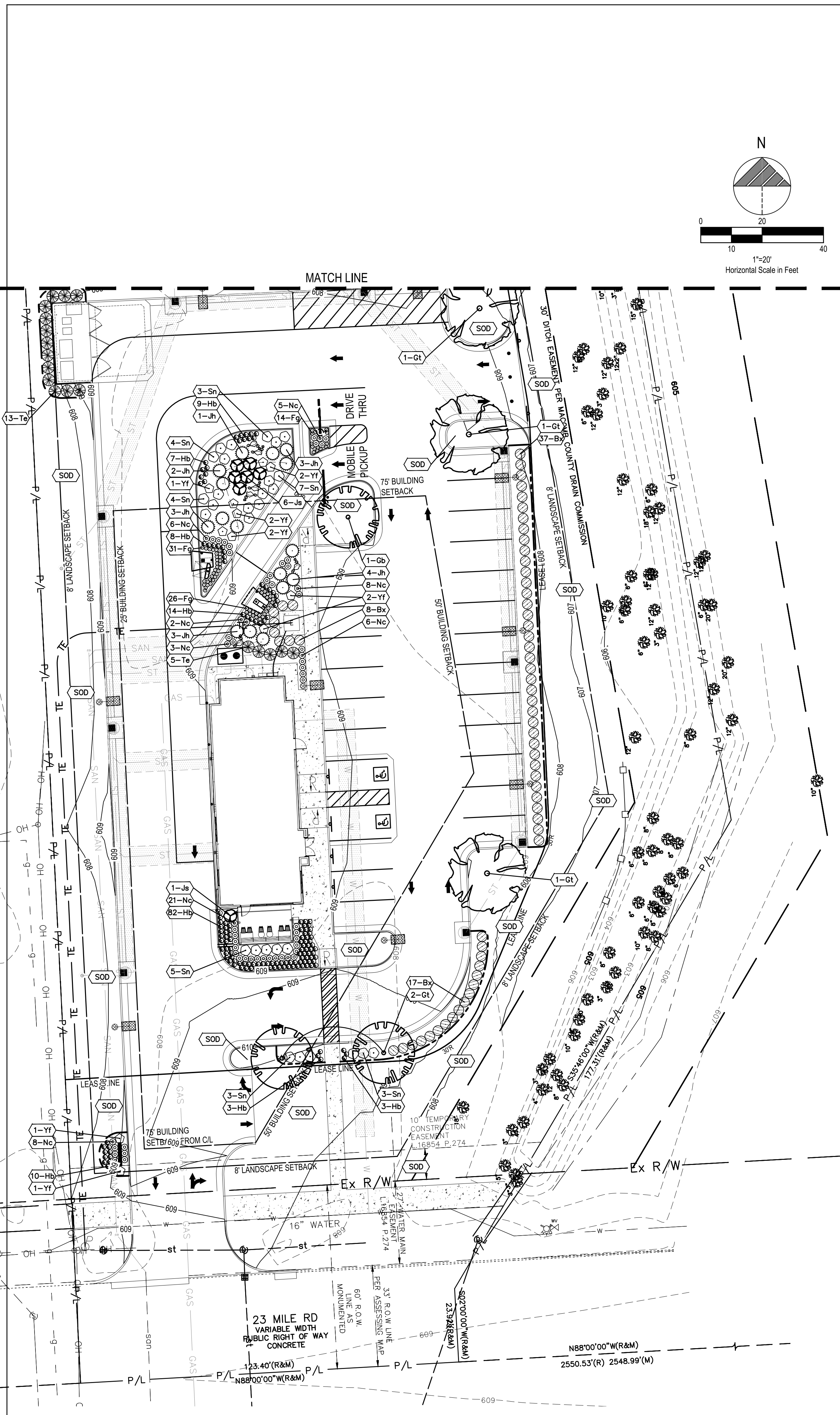
- EXISTING TREE AND SIZE TO REMAIN
- PROPOSED LANDSCAPE BED EDGE
- PROPOSED TREE
- PROPOSED SHRUB / PERENNIAL
- PROPOSED LIMESTONE BOULDER, DESERT SAND, 12"-36"
- PROPOSED PLANT QUANTITY AND SYMBOL
- PROPOSED LAWN AREA
- PROPOSED DETENTION BASIN SEEDING AREA

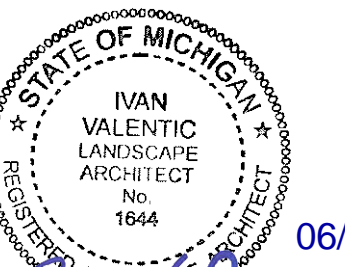
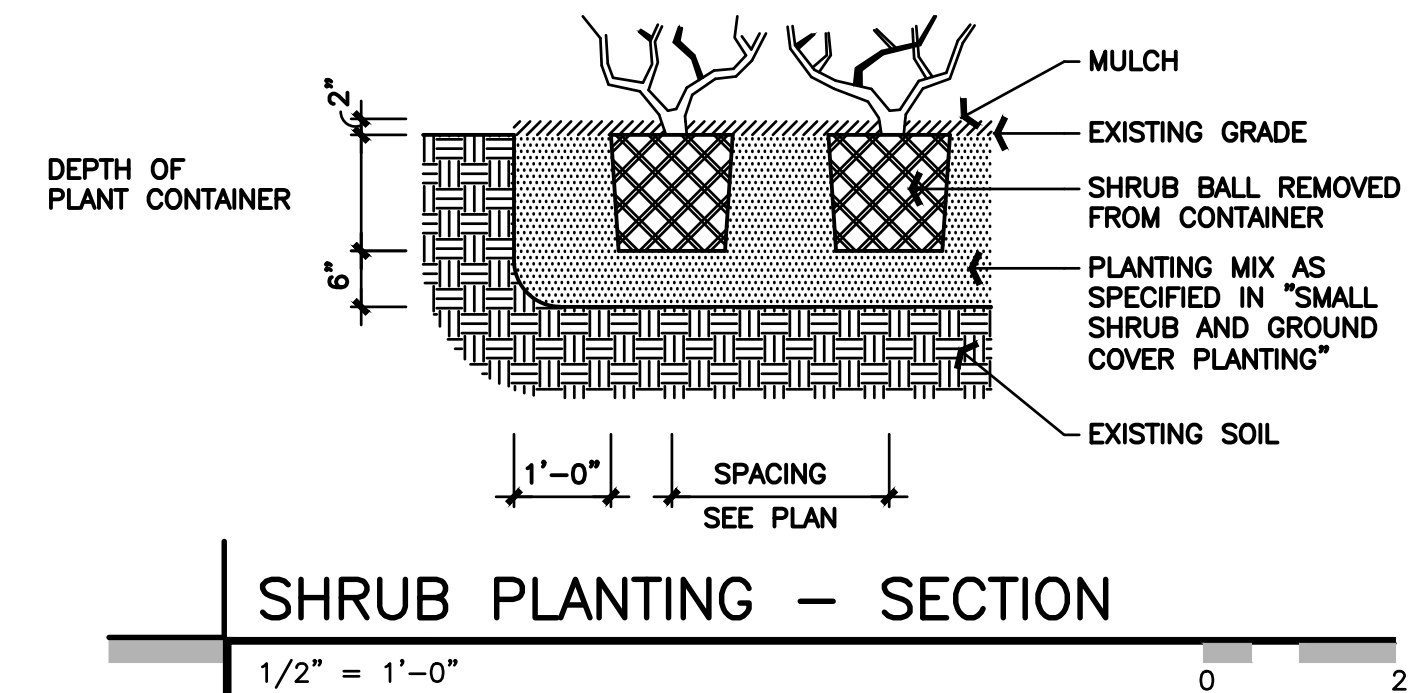
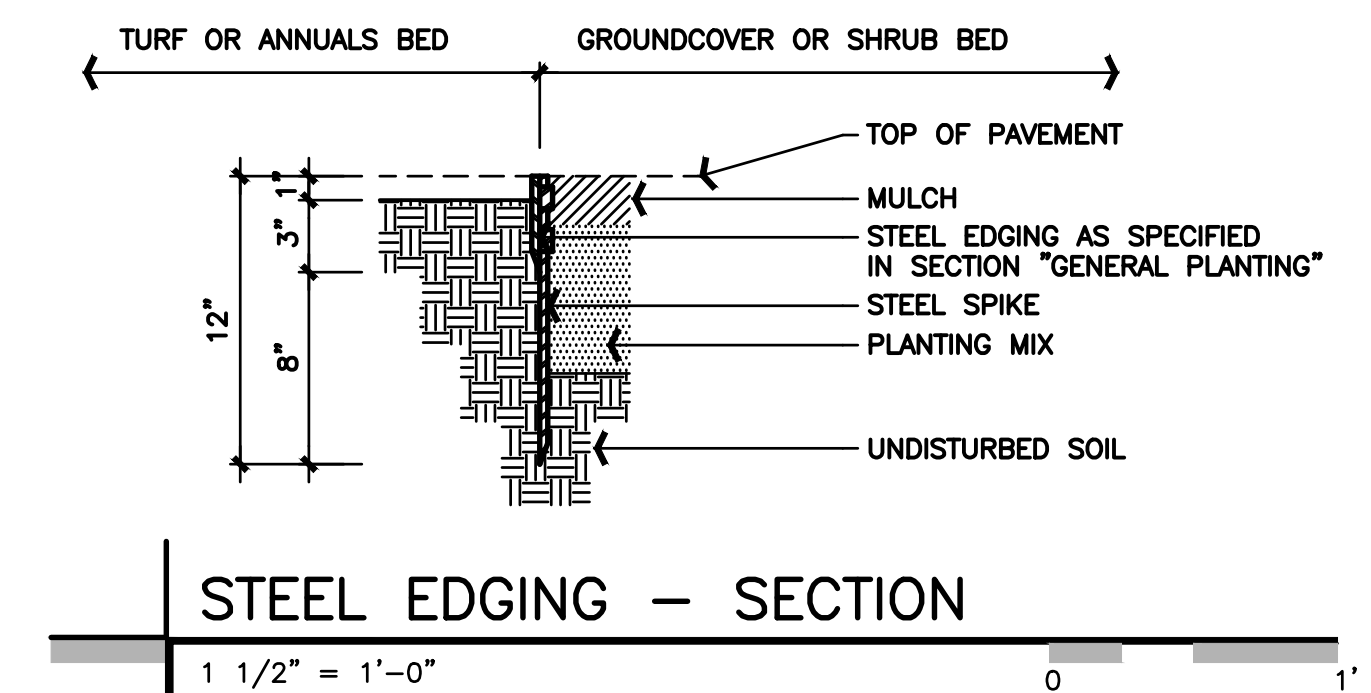
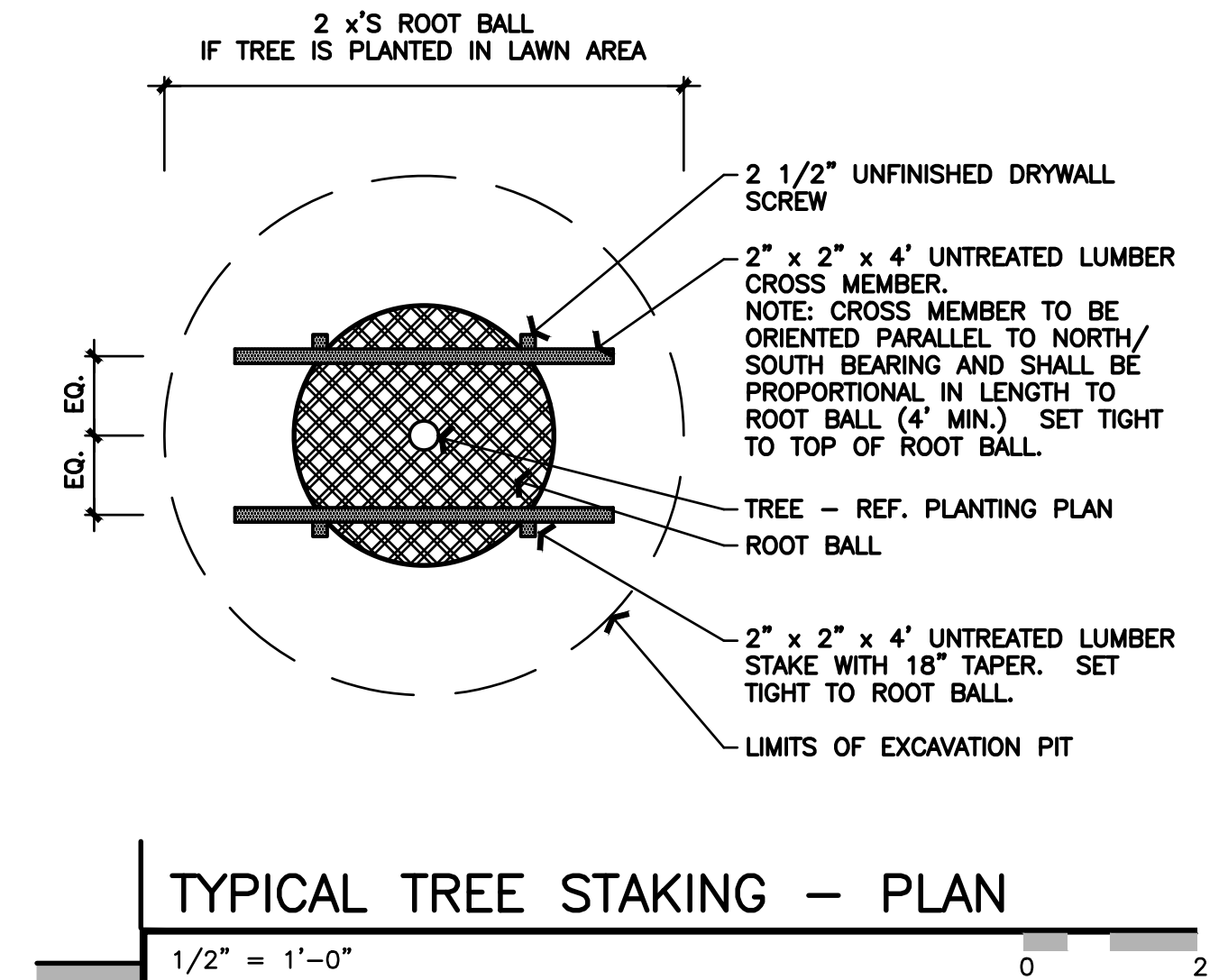
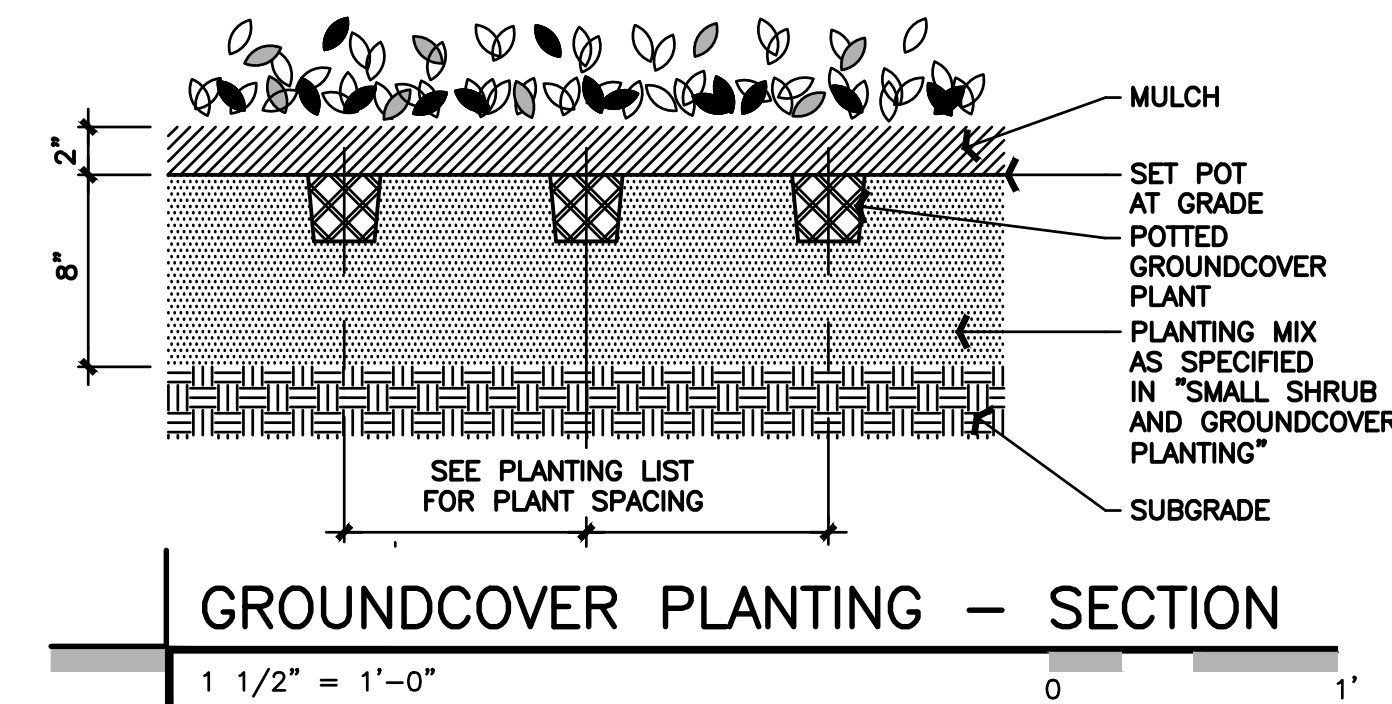
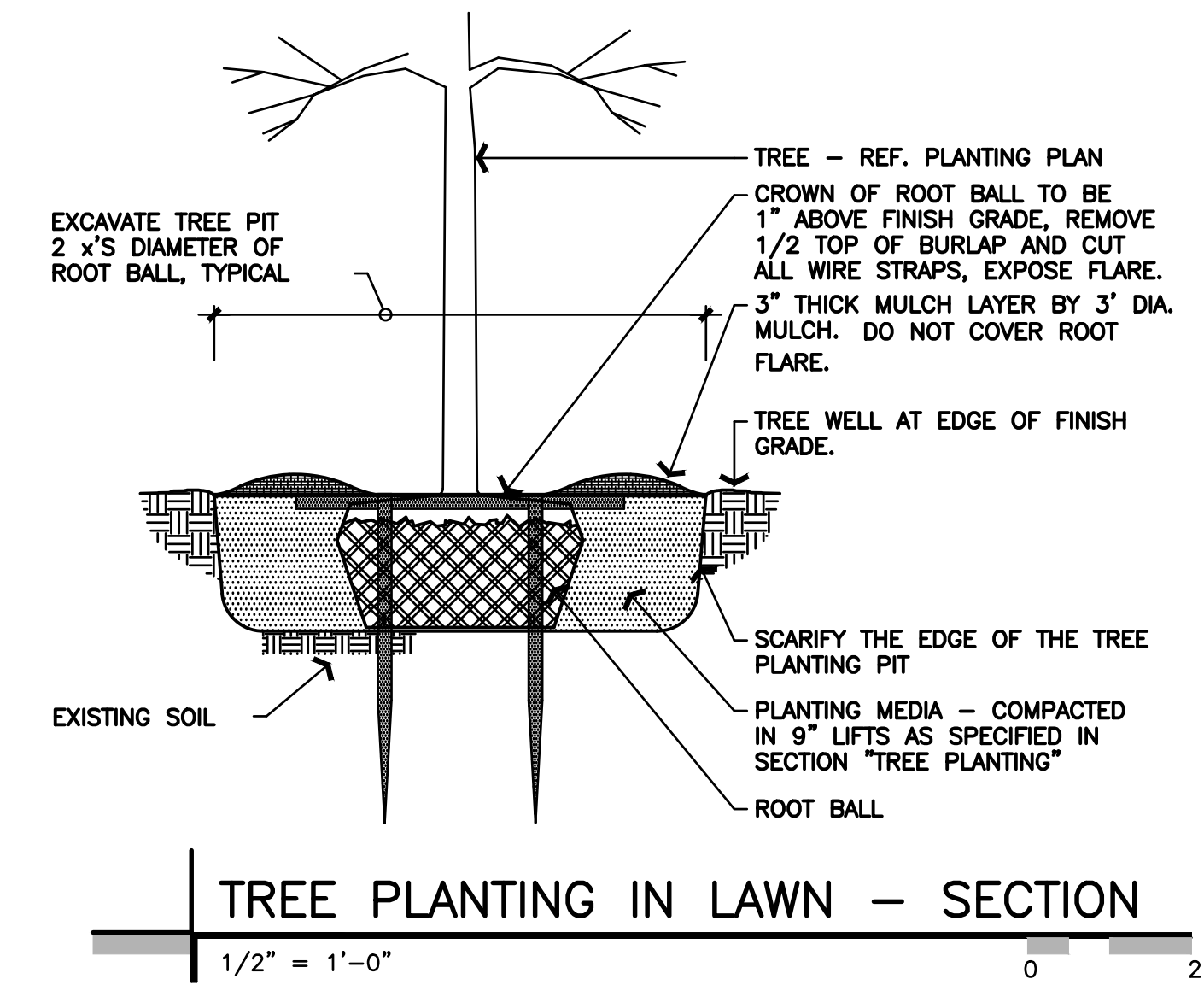
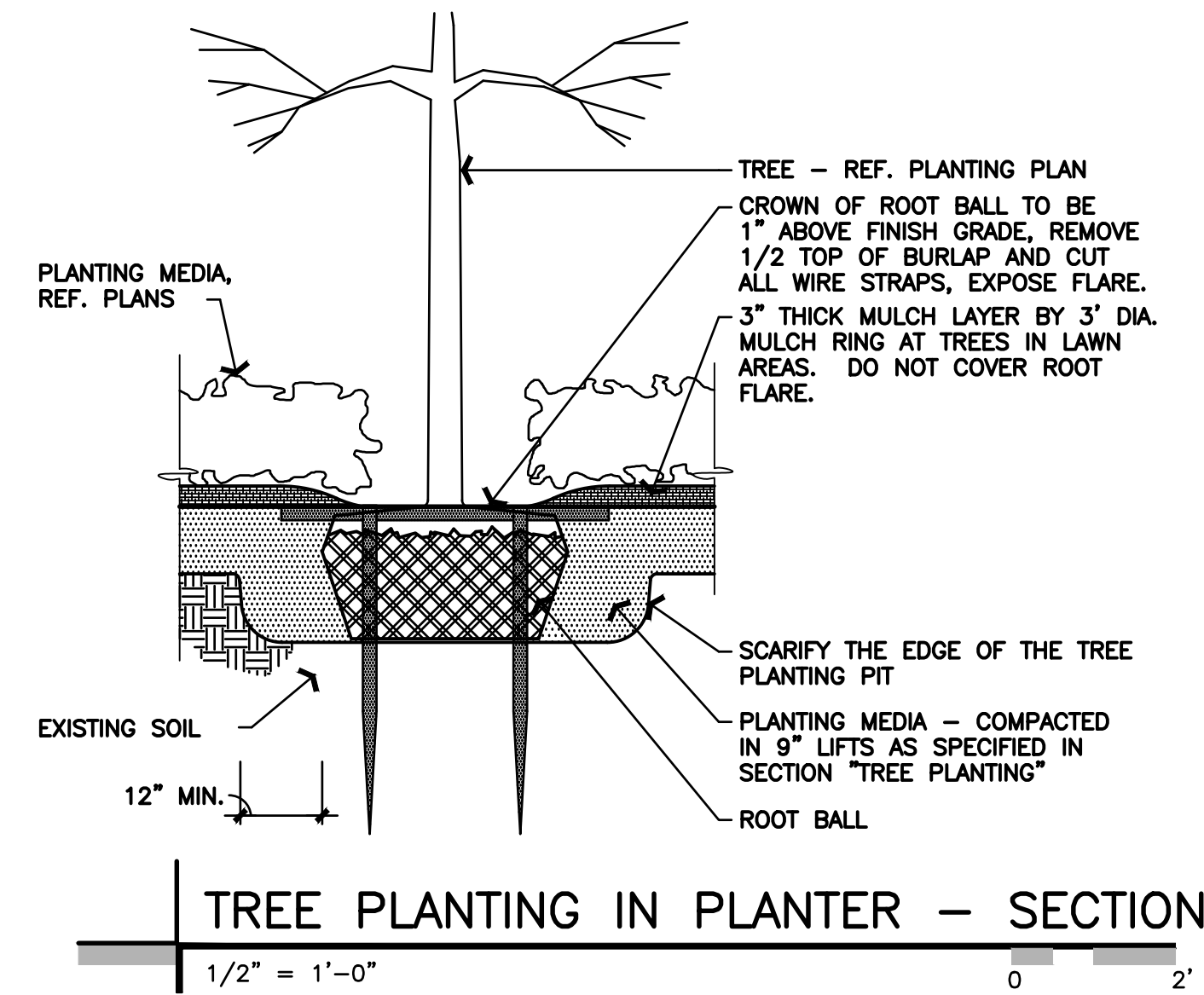
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06/15/22

*Ivan Valentic*

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LANDSCAPE  
DETAILS

**L-501**

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