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CITY OF NOVI
SALT DOME REPLACEMENT
OAKLAND COUNTY, MICHIGAN

GENERAL NOTE

- 1) MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CITY OF NOVI STANDARDS AND SPECIFICATIONS AND THE PROJECT MANUAL
- 2) BUILDINGS AND ELECTRICAL WORK SHALL BE CONSTRUCTED TO ALL RELEVANT STANDARDS AND CODES

FILE: Salt_Dome_Title.dgn				
AUTH	DATE	REVISION		



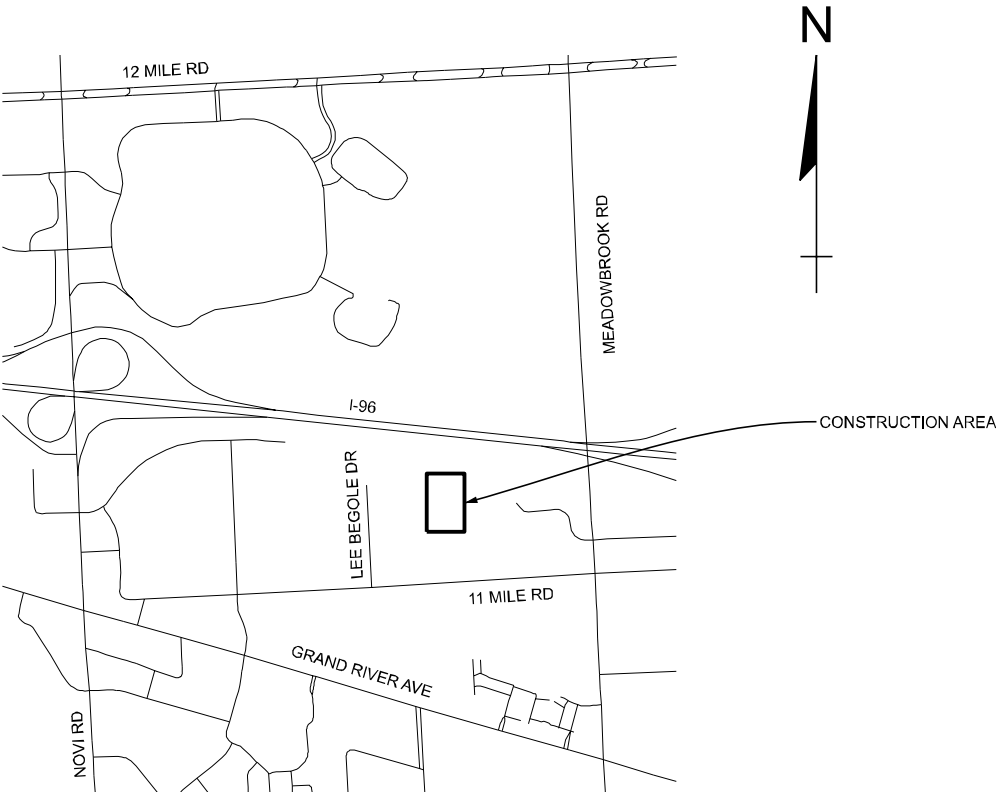
NOVI SALT DOME RECONSTRUCTION

TITLE SHEET

JOB	60728767
DATE	09/23/24
SHEET	1

CALL MISS DIG

3 WORKING DAYS BEFORE YOU DIG
(EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS)
(800) 482-7171 OR 811



MAYOR
JUSTIN FISCHER

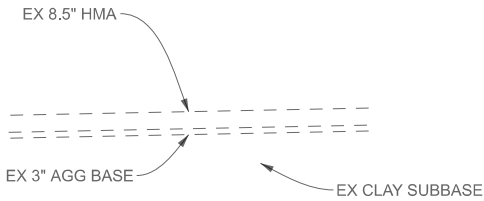
MAYOR PRO TEM
LAURA MARIE CASEY

CITY COUNCIL
DAVID STAUDT
PRIYA GURUMUTHY
MATT HEINTZ
BRIAN SMITH
ERICKA THOMAS

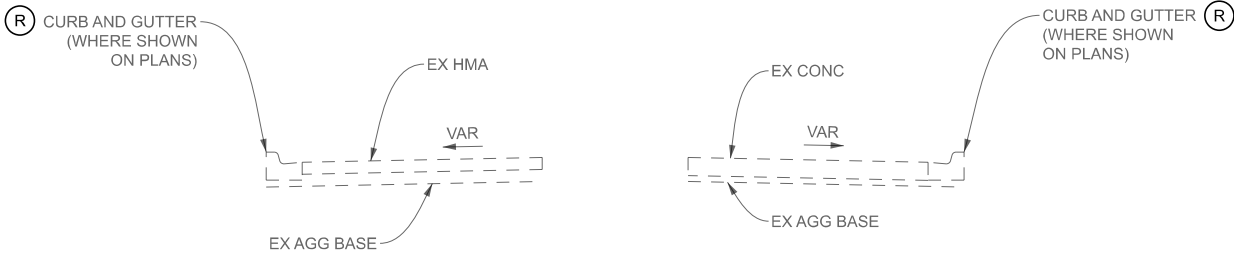
CITY ENGINEER
BEN CROY, PE

CONTRACT FOR:
REMOVAL AND REPLACEMENT OF EXISTING SALT DOME
AND ASSOCIATED SITE WORK

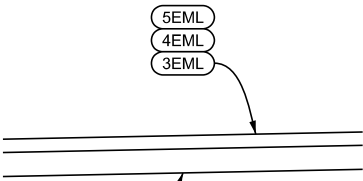




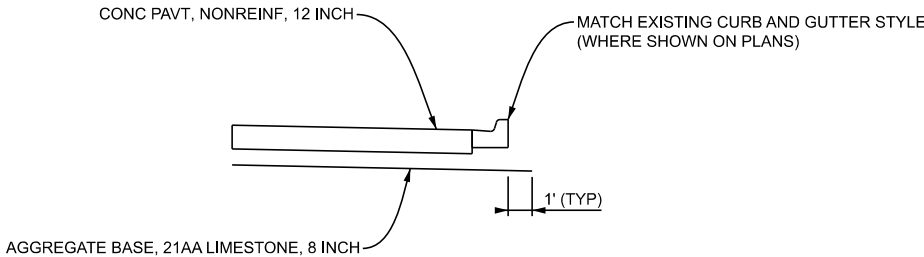
EXISTING TYPICAL SALT DOME FLOOR CROSS SECTION



EXISTING TYPICAL HMA AND CONCRETE CROSS SECTIONS



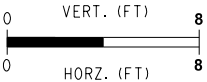
PROPOSED TYPICAL SALT DOME FLOOR CROSS SECTION



PROPOSED TYPICAL CROSS SECTION

IDENT NO.	RATE PER SYD	PERFORMANCE GRADE	REMARKS
5EML	165 lb	64-28	(1.5 INCHES) TOP COURSE (AWI = 260)
4EML	247.5 lb	64-22	(2.25 INCHES) LEVELING COURSE
3EML	330 lb	64-22	(3.0 INCHES) BASE COURSE

SALT DOME FLOOR HMA APPLICATION RATE



FILE: Salt_Dome_Typ.dgn				
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NOVI SALT DOME RECONSTRUCTION

TYPICAL CROSS SECTIONS

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SURVEY

- △ ALIGNMENT POINT MONUMENT
- ⊗ MONUMENT BOX
- △ CP CONTROL POINT
- BM BENCHMARK

BOUNDARY

- CITY LIMIT
- PARCEL-L PARCEL - LEGAL
- PARCEL-NL PARCEL - NON-LEGAL
- PLAT - LEGAL
- PLAT - NON-LEGAL
- ROW - FREE ACCESS
- ROW - LIMITED ACCESS
- SEC SECTION LINE
- SEC 1/4 SECTION LINE - QUARTER
- SEC 1/8 SECTION LINE - EIGHTH
- SEC 1/16 SECTION LINE - SIXTEENTH
- CONCRETE MONUMENT
- PARCEL CORNER
- PLAT CORNER
- ROW MONUMENT
- SECTION CORNER - CENTER
- SECTION CORNER - MEANDER
- SECTION CORNER - QUARTER
- SECTION CORNER - QUARTER-HALF
- SECTION CORNER - SECTION
- SECTION CORNER - SECTION-HALF
- SECTION CORNER - SIXTEENTH
- SECTION CORNER - WITNESS

MONUMENT PRESERVATION

- PRESERVE PRESERVE MONUMENT
- PROTECT PROTECT MONUMENT

SIGNS

- TT POST - DOUBLE
- T POST - SINGLE

BARRIERS

- CONCRETE BARRIER - DOUBLE FACE
- CONCRETE BARRIER - SINGLE FACE
- FENCE
- GUARDRAIL - NOT TO SCALE
- GUARDRAIL - TRUE SCALE
- NOISE BARRIER
- FENCE POST
- GUARDRAIL RUN NUMBER
- IMPACT ATTENUATOR
- POST - MAILBOX
- POST - NO ID

UTILITIES

- UNKNOWN UTILITY
- UTILITY - OUT OF SERVICE
- UTILITY - TO BE REMOVED
- UTILITY - TO BE TAKEN OUT OF SERVICE
- CATCH BASIN COVER
- MANHOLE COVER
- MARKER
- PEDESTAL
- SEWER CLEANOUT ACCESS
- STRUCTURE BOTTOM (DIA VARIES)
- UNKNOWN UTILITY BOX
- FIBER OPTIC
- FIBER OPTIC - OVERHEAD
- FIBER OPTIC MARKER
- CABLE
- CABLE - OVERHEAD
- CABLE MARKER
- CABLE PEDESTAL
- TELEPHONE
- TELEPHONE - OVERHEAD
- TELEPHONE BOX
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- PETROLEUM PIPELINE
- GASOLINE FILLER PIPE
- GASOLINE PUMP
- GASOLINE UNDERGROUND TANK
- PETROLEUM PIPELINE MARKER
- PETROLEUM WELL
- PROPANE TANK
- NATURAL GAS LINE
- NATURAL GAS MARKER
- NATURAL GAS VALVE
- NATURAL GAS WELL
- SANITARY SEWER
- SANITARY SEWER MANHOLE WITH COVER (DIA VARIES)
- IRRIGATION
- WATER MAIN
- FIRE HYDRANT
- GATE VALVE AND BOX
- GATE VALVE IN WELL
- IRRIGATION CONTROL VALVE
- IRRIGATION SPRINKLER HEAD
- SERVICE METER
- SERVICE SHUTOFF
- WATER WELL

UTILITIES

- E ELECTRICAL CABLE
- E-OH ELECTRICAL CABLE OVERHEAD
- E ELECTRICAL CABLE IN CONDUIT
- ELECTRICAL CABLE IN CONDUIT - DIRECTIONAL BORE
- ELECTRICAL CONTROLLER CABINET - PAD MOUNTED
- ELECTRICAL HANDHOLE
- ELECTRICAL MANHOLE
- ELECTRICAL POLE UTILITY - EXISTING
- ELECTRICAL POLE UTILITY - PROPOSED
- ELECTRICAL TRANSFORMER - PAD MOUNTED
- LIGHTING CONTROL PANEL
- LIGHT POST
- R&S LIGHT STANDARD EXISTING - TO BE REMOVED & SALVAGED

VEGETATION

- BRUSH LINE
- HEDGE LINE
- TREE LINE - CANOPY OR TRUNK
- TREE LINE - TRUNK
- SHRUB
- TREE - CONIFER
- TREE - DECIDUOUS
- TREE - STUMP

ROADSIDE / SITE

- ANTENNA
- BIG ROCK
- FLAG POLE
- PICNIC STOVE
- PICNIC TABLE
- SATELLITE DISH

RAILROAD

- TRACK
- CROSSING - GATE
- CROSSING - SIGNAL BOX
- CROSSING - SIGNAL FLASHING
- CROSSING - SYMBOL

ENVIRONMENTAL

- EROSION CONTROL - SILT FENCE
- WETLAND
- WETLAND - SPOT EL
- CONTAMINATION - MONITORING WELL
- EROSION CONTROL NUMBER
- EROSION CONTROL - RIPRAP
- WATER TABLE - PLAN NOTE
- POTENTIALLY CONTAMINATED SITE

GENERAL LABELING

- LEFT TURN ARROW
- TRAFFIC FLOW ARROW
- ABANDON
- BULKHEAD
- CLEARING
- REMOVE
- SALVAGE
- SAVE
- ADJUST
- ADJUST - STRUC COVER WITH TYPE
- ADJUST - BY OTHERS
- RELOCATE - WITH CASE NUMBER
- RELOCATE - BY OTHERS
- SLOPE STAKE LINE
- BORING

DRAINAGE

- CATCH BASIN W/ COVER (DIA VARIES)
- DRAINAGE STRUCTURE NUMBER
- DRAIN CASTING
- DROP INLET
- END SECTION (SIZE VARIES)
- FLOW DIRECTION ARROW
- HEADWALL (SIZE VARIES)
- MANHOLE W/ COVER (DIA VARIES)
- MANHOLE BASE W/ COVER (SIZE VARIES)
- MANHOLE TEE W/ COVER (SIZE VARIES)
- OUTLET HEADWALL (SIZE VARIES)
- CULVERT - EXISTING
- CULVERT (SIZE VARIES)
- DITCH CENTERLINE
- STORM SEWER - EXISTING
- STORM SEWER
- STORM SEWER - TO BE REMOVED
- UNDERDRAIN
- WATER EDGE

SURFACING

REMOVAL

- HMA SURFACE, REM
- HMA COLDMILLING
- HMA SURFACE REMOVAL AND / OR PAVEMENT REMOVAL

PROPOSED

- AGGREGATE APPROACH
- BRIDGE APPROACH
- HMA APPROACH
- MISCELLANEOUS CONCRETE
- CURB & GUTTER REMOVAL

SIDEWALK & NON-MOTORIZED

- SIDEWALK - REMOVAL
- SIDEWALK - CONCRETE RAMP
- NON-MOTORIZED HMA PATH
- NON-MOTORIZED BOARDWALK
- SIDEWALK - DETECT. WARNING SURF.
- SIDEWALK - LANDING
- SIDEWALK - RAMP LABEL

TYPICAL SECTION

- CONCRETE - PROPOSED
- HMA - PROPOSED

MAINTAINING TRAFFIC

- TYPE III BARRICADE
- CHANNELIZING DEVICE - CONE
- CHANNELIZING DEVICE - DRUM
- LIGHT - HIGH INTENSITY TYPE B
- LIGHT - STEADY BURN TYPE C
- LIGHTED ARROW PANEL - BAR
- LIGHTED ARROW PANEL
- PORTABLE CHANGEABLE MESSAGE SIGN
- TRAFFIC REGULATOR
- TEMPORARY SIGN
- TEMPORARY TRAFFIC SIGNAL
- WORK AREA

NOTE:

EXISTING ITEMS ARE REPRESENTED BY THIN LINE WEIGHTS.
PROPOSED ITEMS ARE REPRESENTED BY HEAVIER LINE WEIGHTS.

FILE: Salt-Dome-Legend.dgn

AUTH DATE REVISION

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NOVI SALT DOME RECONSTRUCTION

LEGEND

JOB
60728767
DATE
09/23/24
SHEET
3

GENERAL NOTES

STANDARDS AND SPECIFICATIONS

All work must be completed in accordance with the City of Novi Standards and Specifications.

MAINTAINING TRAFFIC

See Project Manual.

CITY WORK HOURS

City work hours are Monday-Saturday, 7am-7pm. An approved variance is required to work outside those hours.

UNDERGROUND UTILITIES / MISS DIG

For protection of underground utilities and in conformance with Public Act 53, 1974, the Contractor shall dial 1-800-482-7171 a minimum of three full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the "Miss Dig" alert system.

If plan information indicates an existing underground utility is or will be out of service within the limits of this contract. The Contractor is cautioned to treat such a line as if it were still in service and notify "Miss Dig" when working in the area of the out of service facility.

All utility information is approximate and is based on information provided by the owners.

Underground utilities within landscaped entrance islands are not part of MISS DIG's system. Use extreme caution in these areas.

EXISTING WATER MAINS AND SEWERS

The Contractor shall be responsible for any damage to properly identified existing water mains and/or existing sewers during the construction of this project. Field verification for vertical and horizontal location is required.

TRASH COLLECTION

When access by refuse collection vehicles is not provided, Contractor shall collect, deliver and return refuse containers from individual driveways and deliver to a central location for pickup by refuse haulers. Refuse in the City of Novi is collected by various private firms on scheduled days. Trash service shall not be delayed unless agreed to in writing with the respective service and approval by the Engineer and City.

MAIL COLLECTION AND DELIVERY

Mail collection and delivery must be maintained during construction. If access for mail delivery is interrupted, Contractor shall furnish and assemble temporary collection and delivery boxes for each affected property at a central location, which will be determined by the Novi Postmaster. Mailboxes to be a type approved for use the U.S. Postmaster.

CONTRACTOR PARKING

Contractor parking areas will be limited to public ROW areas only. Do not occupy open roadways with parked vehicles.

HYDRANT USE

The Contractor is required to contact the City's DPW facility at 248-735-5640 to make arrangements prior to use.

SAWCUTS

The Contractor shall sawcut the existing pavement at all removal limits as shown on plans or directed by Engineer to provide a smooth vertical edge. This will not be paid for separately, it is included in payment for removal items.

OPEN EXCAVATION

Protective fencing around all open excavations is required. This will not be paid for separately.

SLOPES

Class A slopes shall be constructed on this project.

DUST CONTROL

The Contractor is responsible for controlling dust on the project by whatever legal means on any aggregate or surfaces not restored as requested by the Engineer. This will not be paid for separately.

SURFACE RESTORATION

See Project Manual.

BUILDINGS

All buildings and structures must be constructed to all applicable building and electrical standards.

TREE PROTECTION NOTES

ROOT PROTECTION

- Any damage to tree roots is to be reported to the on-site construction observer or owner.
- Do not drive or park any vehicle or equipment, store any materials, or wash any equipment or materials within the drip line of any tree. These or other actions within the drip line may be considered damage by the Engineer.
- Conduct operations to minimize excavations adjacent to trees. Where required work exposes tree roots, place wet mulch or other approved materials as soon as possible. Consult with Engineer or City Forester prior to beginning work.

TREE PROTECTION BARRIER

- All trees within the work zone shall have tree protection barrier installed prior to construction unless otherwise directed by the Engineer. Tree protection barrier ordered by the Engineer will be measured and paid for as silt fence.
- Barrier to be silt fence material and placed for use as visual and physical tree protection barrier. It is not required that toe be buried or sections be overlapped as for soil erosion control.
- Any damage to any tree is to be reported to the on-site construction observer or owner.
- Contractor is responsible for any tree damage. Trees determined to be damaged in the opinion of the Engineer shall be replaced at the Contractor's expense.

SOIL EROSION AND SEDIMENTATION CONTROL

SEQUENCE OF CONSTRUCTION

- Prior to removing pavement, sidewalk, or driveways, or commencing grading operation; place temporary SESC measures (inlet filters and silt fence). Engineer's approval of SESC measures must be obtained prior to excavation. Approval by the Engineer is also required for material stockpile and staging area locations. Material stockpiles shall be ringed with silt fence.
- Installation of silt fencing or tree protection fencing shall not occur prior to the initial city pre-construction meeting. When natural features exist on the site, inspection of staking may be required prior to the installation of the fencing.
- During construction, maintain all temporary SESC measures. When inlet convers are removed, inlet filters shall be lowered and remain on the structures at all times. Address any deficiencies in SESC measures immediately.
- Within five days of the completion of paving, permanent seeding shall be placed.
- Remove temporary SESC measures within one week of placing permanent seeding.

SESC NOTES

- Contractor is responsible for installation and maintenance of all soil erosion and sedimentation control measures and for full compliance with the soil erosion and sedimentation control permit to be issued for the project.
- Temporary soil erosion and sedimentation control measures shall include inlet filters and silt fence in this project. Inlet filters shall be ACF Environmental Silt Sack or approved equal. Silt Fencing shall be Synthetic Industries "Terra Tex", Exxon "GTF-180", or approved equal.
- All SESC measures shall be constructed in accordance with the Oakland County details included in the plans.

- Inlet filters shall be installed on all drainage inlet structures within the reconstruction limits and on structures downstream of the reconstruction area which, in the opinion of the Engineer, may receive runoff from the work area.
- Silt fencing shall be installed at locations determined by the Engineer.
- Temporary pumps, if required, shall be discharged into a filter bag or similar device. Contractor shall obtain advance approval from the Engineer for all dewatering operations and filter devices to be used.
- Street sweeping and dust control shall be the responsibility of the Contractor, and shall be completed daily or as directed by the Engineer.
- All drainage ditches shall be stabilized with erosion control blanket and shall utilize check dams as necessary. Drainage ditches steeper than 3% shall be sodded.
- Permanent seeding, including topsoil, fertilizer, and mulch blankets shall be placed on all unpaved disturbed areas in accordance with the MDOT Standard Specifications. Seeding work shall be completed on each roadway within five days of the completion of paving work on that roadway.
- Stockpile locations shall be ringed with silt fence. All stockpile locations shall be approved by the Engineer.

SOIL SURVEY

The soils in the proposed Salt Dome Rehabilitation area include:

- Marlette sandy loam, 6 to 12 percent slopes
- Sission fine sandy loam, 1 to 6 percent slopes
- Owosso sandy loam, 1 to 6 percent slopes
- Houghton and Adrian mucks
- Udorthents, loamy, nearly level

IRRIGATION AND LANDSCAPE LIGHTING SYSTEMS

Contractor shall protect irrigation and landscape lighting systems from damage. If damaged, the Contractor shall restore all irrigation and landscape lighting systems at the Contractor's expense. See Project Manual for additional information.

SURVEY INFORMATION

CP 100
N: 359722.90
E: 13367493.26
Elev: 901.94

CP 101
N: 359905.13
E: 13367396.03
Elev: 903.99

CP 200
N: 359812.62
E: 13367619.07
Elev: 900.28

CP 201
N: 359691.45
E: 13367627.75
Elev: 902.11

CP 202
N: 359599.42
E: 13367611.89
Elev: 900.60

CP 203
N: 359579.27
E: 13367544.58
Elev: 902.35

BM 1
N: 359830.26
E: 13367387.54
Elev: 906.13

MDOT STANDARD PLANS

NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the standard plan given below opposite each item unless otherwise indicated.

Title	Plan No.
ROAD	
INTEGRAL CURB AND INTEGRAL CURB & GUTTER	R-31
CONCRETE SHOULDER GUTTER AND SPILLWAY	R-35
TYPICAL JOINT LAYOUTS FOR CONCRETE PAVEMENT	R-42
SEEDING AND TREE PLANTING	R-100

FILE:NOV12.CEL

AUTH

DATE

REVISION

60728767

DATE

09/23/24

SHEET

4

SALT DOME RECONSTRUCTION

GENERAL NOTES

JOB

60728767

DATE

09/23/24

SHEET

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CITY OF

NOVI

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QUANTITY SHEET

Item No.	Item Description	Unit	Total Quantity	Misc As Directed	Novi Salt Dome
1	Mobilization, Max 10%	LSUM	1	1	0
2	Pre-Construction Audio-Visual	LSUM	1	1	0
3	Erosion Control, Silt Fence	Ft	200	200	0
4	Erosion Control, Inlet Protection, Fabric Drop	Ea	4	4	0
5	Pavt, Rem, Modified	Syd	388		388
6	HMA Surface, Rem, Modified	Syd	341		341
7	Curb and Gutter, Rem, Modified	Ft	89		89
8	Conc Pavt with Intergral Curb, Nonreinf, 12 inch	Syd	731		731
9	Aggregate Base, 21AA, Limestone, 8 inch	Syd	738		738
10	Spillway, Conc	Ft	10		10
11	Riprap, Plain	Syd	8		8
12	Pipe Bollard	Ea	2		2
13	Salt Dome, Rem	LSUM	1		1
14	Salt Dome, 82' Diameter w/ 10' Wall	LSUM	1		1
15	Conveyor System Furnish and Install	LSUM	1		1
16	Conduit, Schedule 80 PVC, 2 inch	Ft	300		300
17	Conduit, RGS, 1-1/4 inch	Ft	100		100
18	DB Cable, in Conduit, 600V, 1/C#3	Ft	2025		2025
19	Cable, Equipment Grounding Wire, 1/C#8	Ft	675		675
20	Combination Starter/Non-Fusible Disconnect Switch	Ea	1		1
21	Fusible Disconnect Switch	Ea	1		1
22	Conc, Grade 3500	Cyd	152		152
23	Reinforcement, Steel, Epoxy Coated	Lb	14718		14718
24	Excavation, Fdn	Cyd	950	710	240
25	Backfill, Structure, CIP	Cyd	378	265	113
26	Embankment Structure, CIP	Cyd	475	475	0
27	Maintaining Traffic	LSUM	1	1	
28	Surface Restoration	LSUM	1	1	


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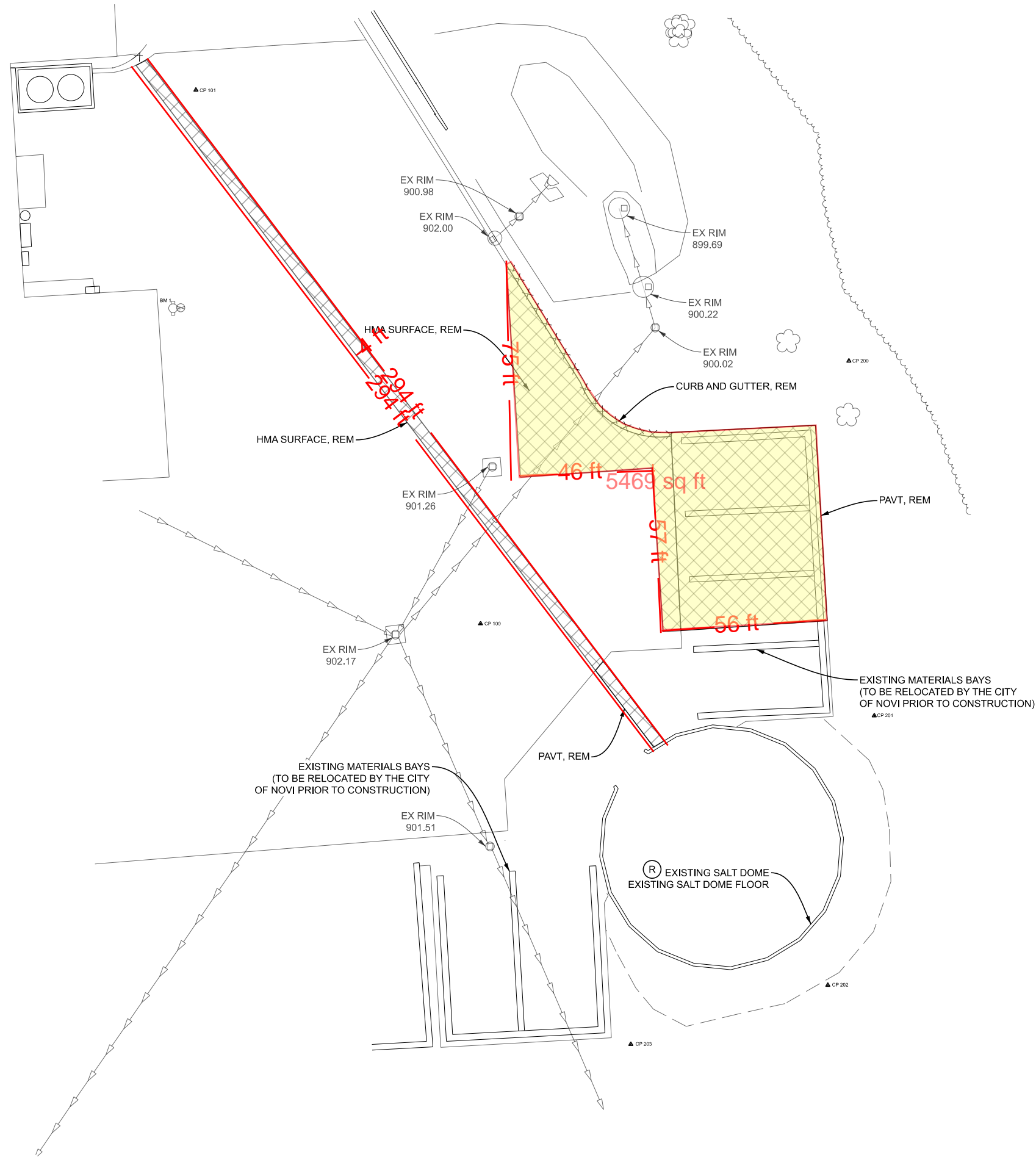
NOVI SALT DOME RECONSTRUCTION

QUANTITY SHEET

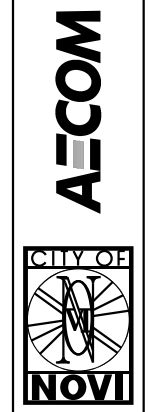
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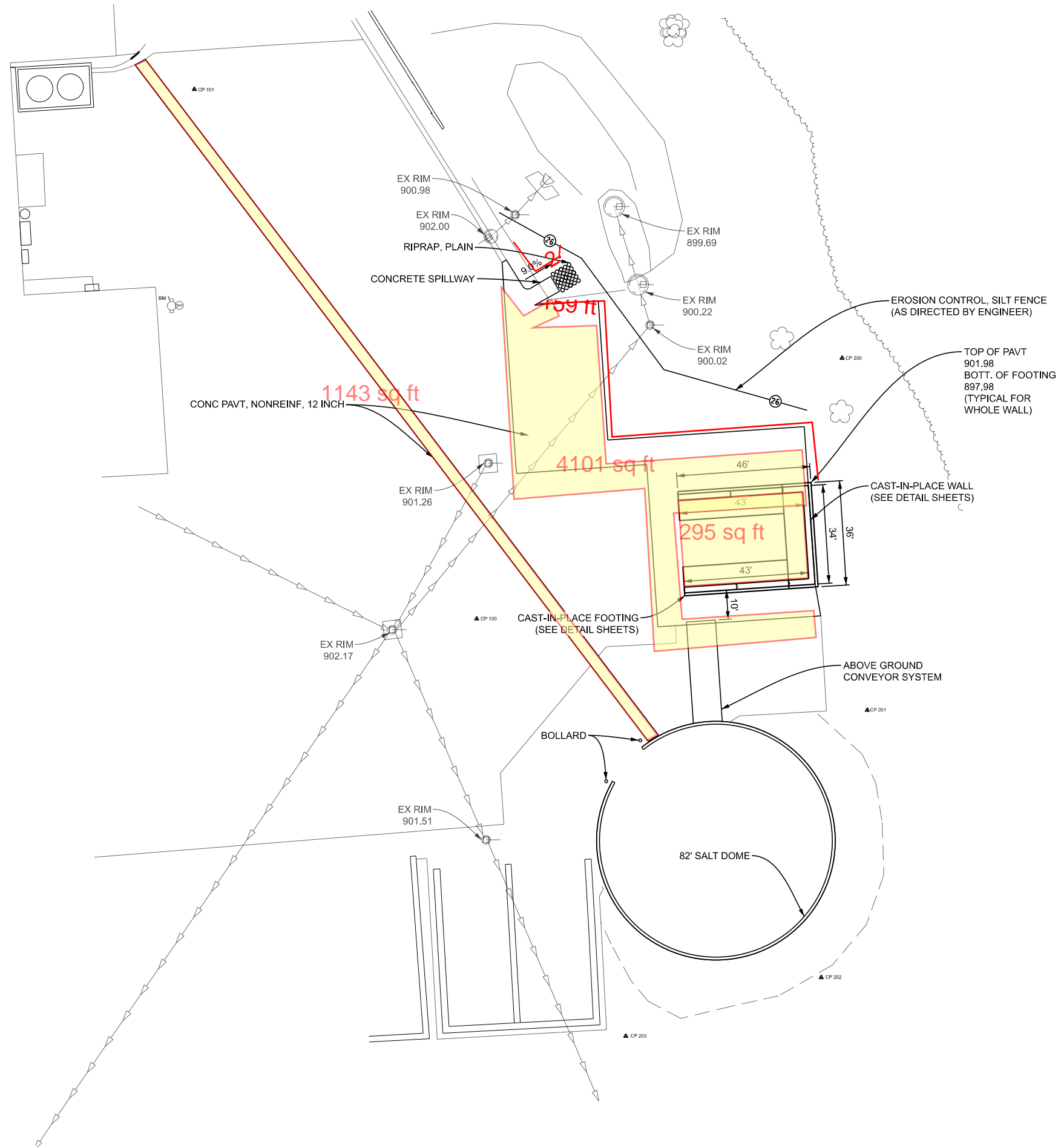


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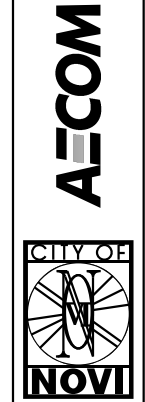


NOVI SALT DOME RECONSTRUCTION
SITE PLAN REMOVAL

JOB 60728767
DATE 09/23/24
SHEET 6



FILE: Salt_Dome_Plan_001_002.dgn		
AUTH	DATE	REVISION



NOVI SALT DOME RECONSTRUCTION

SITE PLAN CONSTRUCTION

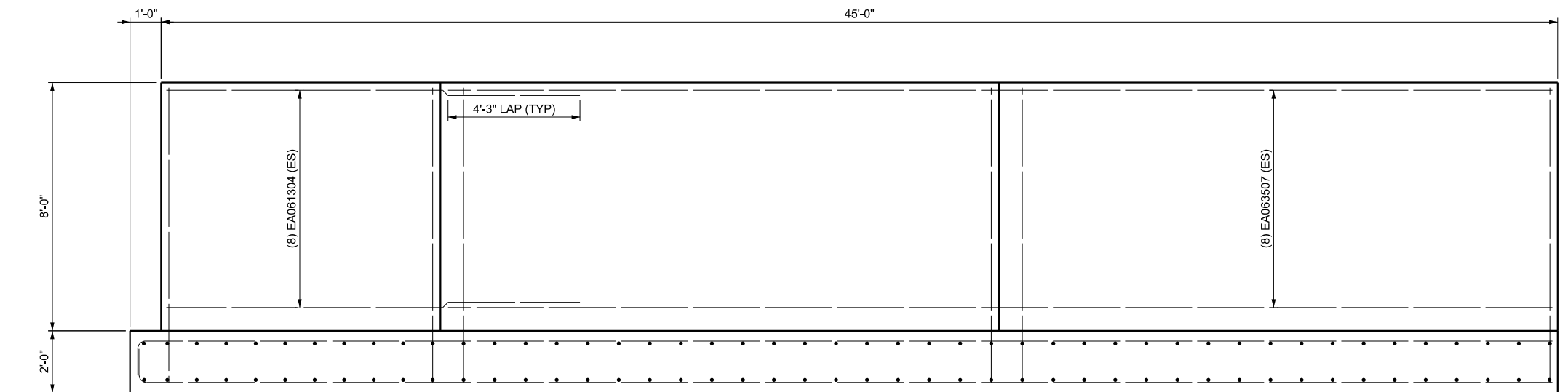
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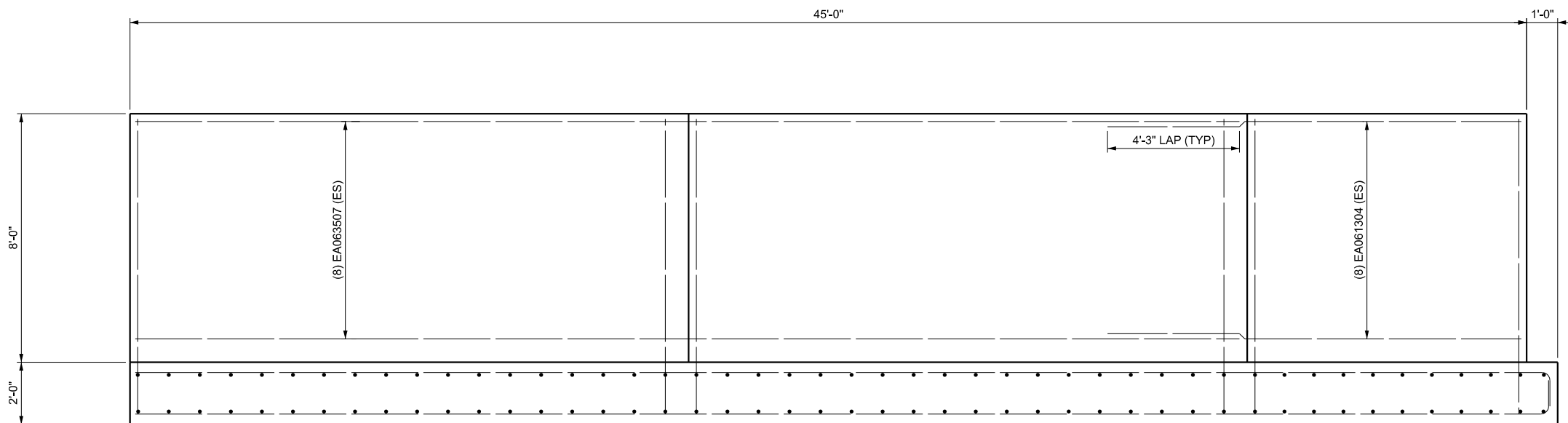
A horizontal scale bar labeled "HORZ. (FT)" with markings at 0 and 6. The bar is divided into two equal segments, each representing 3 feet.



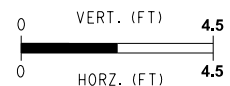
HORZ. (FT)



ELEVATION OF NORTH WALL



ELEVATION OF SOUTH WALL

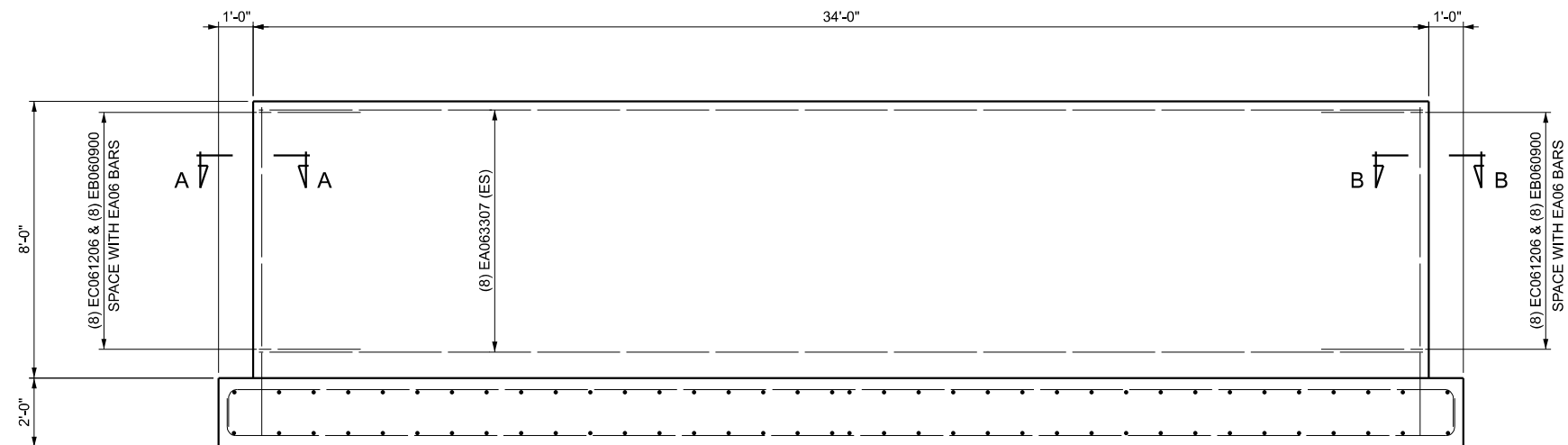


FILE: Salt_Dome_Plan_005.dgn				
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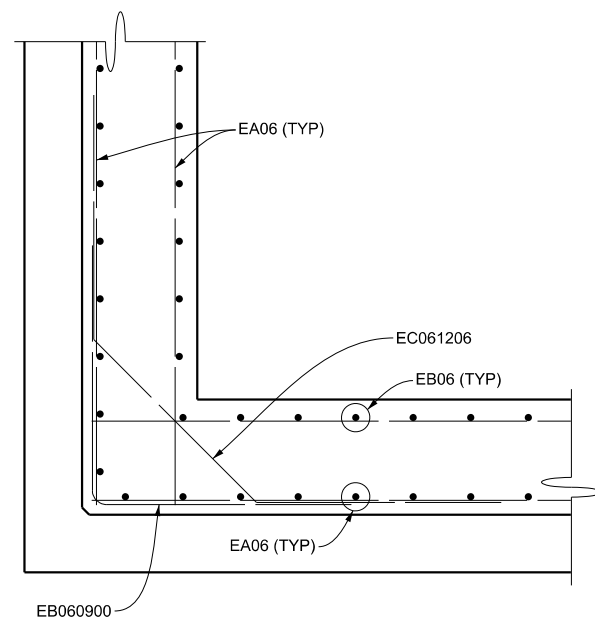


NOVI SALT DOME RECONSTRUCTION
WALL AND FOOTING ELEVATION

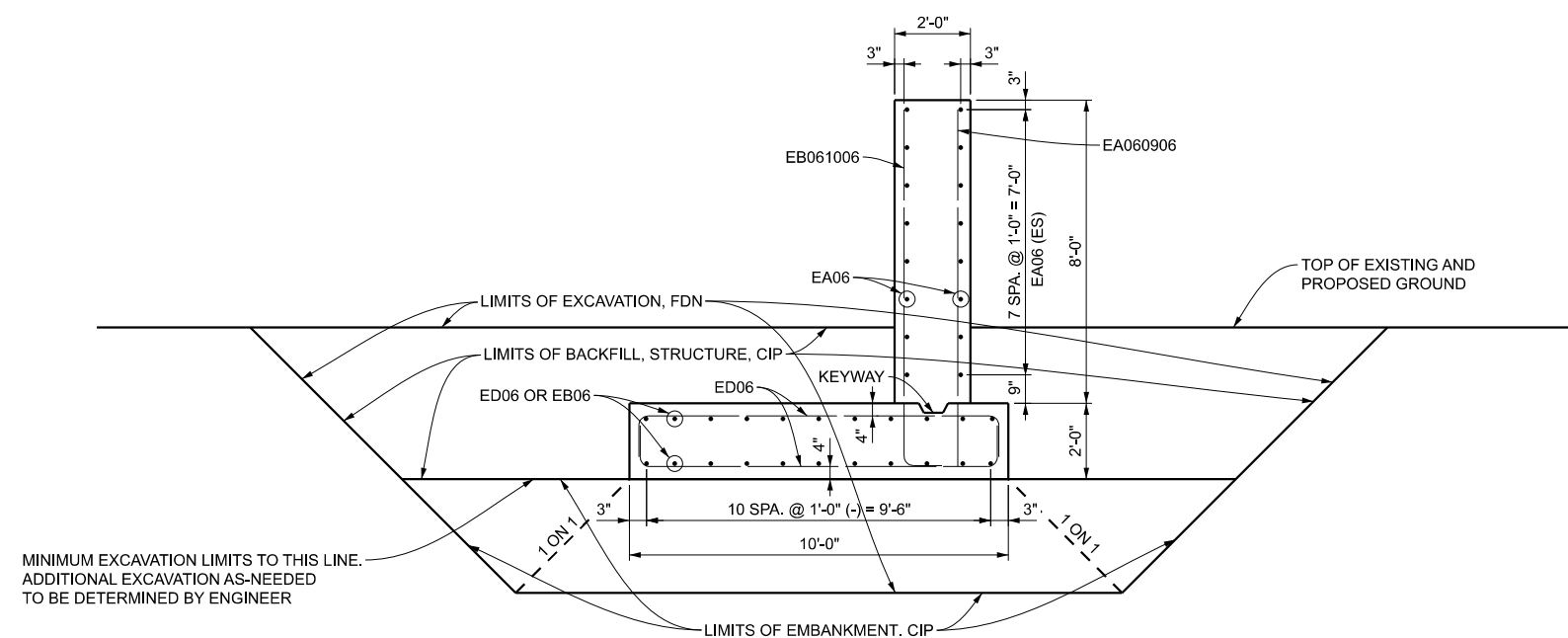
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DATE	09/23/24
SHEET	10



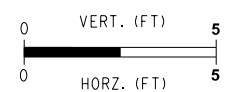
ELEVATION OF EAST WALL



SECTION A-A
(SECTION B-B OPPOSITE HAND)



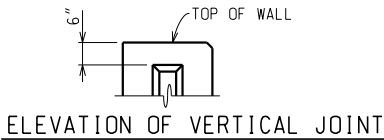
TYPICAL CROSS SECTION



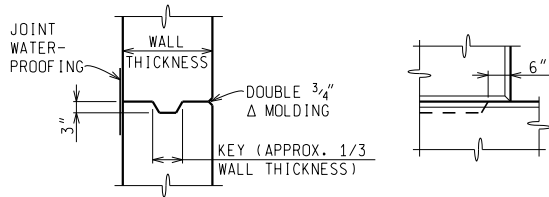
BAR	BAR DIMENSIONS							NUMBER	WEIGHT
	a	b	c	d	e	f	g		
EA060906	9'-6"							124	1769
EA061304	13'-4"							32	641
EA063307	33'-7"							16	807
EA063507	35'-7"							32	1710
EB060900	4'-6"	4'-6"						16	216
EB061006	9'-6"	1'-0"						118	1861
EB064608	45'-7"	1'-1"						44	3084
EC061206	3'-0"	4'-0"	3'-0"	3'-0"	4'-3"	3'-0"	4'-3"	16	300
ED061108	1'-1"	9'-6"	1'-1"					176	3084
ED063708	1'-1"	35'-6"	1'-1"					22	1245

MISCELLANEOUS QUANTITIES

750	Cyd	Excavation, Fdn
378	Cyd	Backfill, Structure, CIP
275	Cyd	Embankment, Structure, CIP
152	Cyd	Conc, Grade 3500HP
14718	Lb	Reinforcement, Steel, Epoxy Coated



ELEVATION OF VERTICAL JOINT

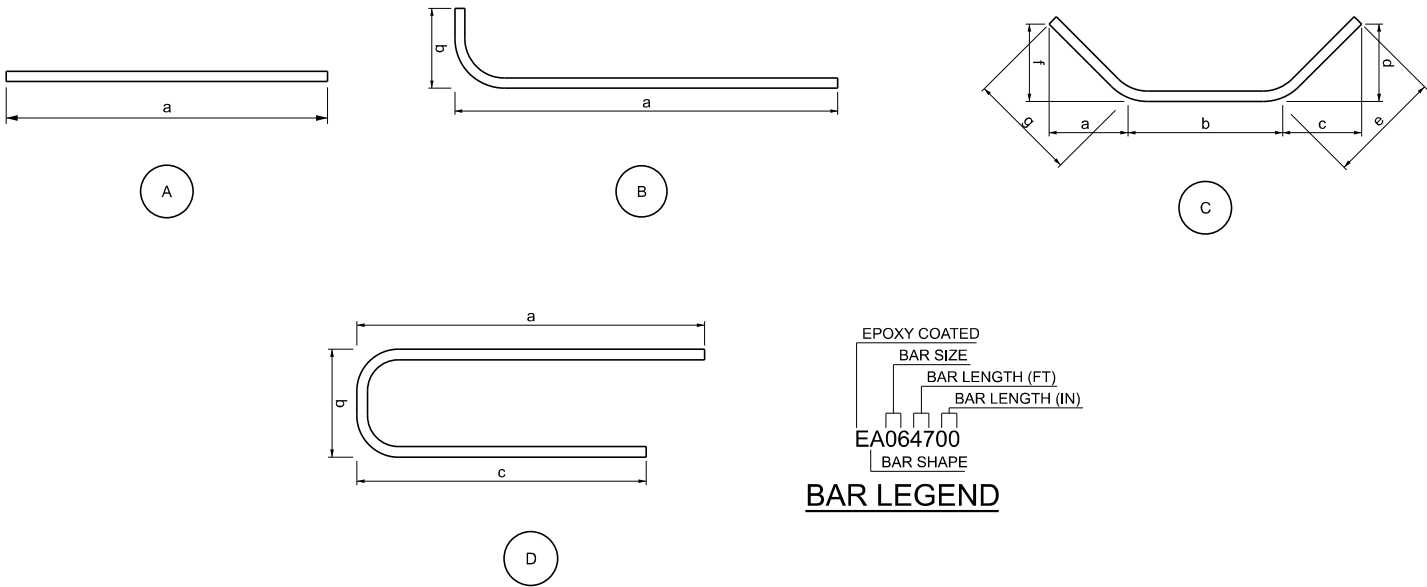


SECTION

ELEV. OF HORIZ. JOINT

CONSTRUCTION JOINT DETAILS

NOTE: WHERE OPTIONAL CONSTRUCTION JOINTS ARE USED, THERE WILL BE NO PAYMENT FOR THE REQUIRED JOINT WATERPROOFING.



EPOXY COATED
BAR SIZE
BAR LENGTH (FT)
BAR LENGTH (IN)
EA064700
BAR SHAPE
BAR LEGEND

NOTES:

UNDERCUT SOIL CLASSIFIED AS ORGANIC AND REPLACE WITH "EMBankment, Structure, CIP" COMPACTED TO 100 PERCENT OF MAXIMUM UNIT WEIGHT. THE ENGINEER WILL DETERMINE ACTUAL LIMITS OF EXCAVATION AT THE TIME OF CONSTRUCTION.

THE DESIGN OF THE RETAINING WALL IS BASED ON THE MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONC, GRADE 3500HP	F'C = 3000 PSI
STEEL REINFORCEMENT	FY = 60,000 PSI

THE DESIGN OF THE RETAINING WALL WAS PERFORMED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION AND THE CONDITION THAT FILL BEING RETAINED BY THE RETAINING WALL DOES NOT EXTEND ABOVE THE TOP OF THE WALL BASED ON A FILL UNIT WEIGHT OF 120 PCF AND A COEFFICIENT OF EARTH PRESSURE OF 0.50.

UNLESS OTHERWISE SHOWN ON THE PLANS, PROVIDE MINIMUM CONCRETE CLEAR COVER FOR REINFORCEMENT ACCORDING TO THE FOLLOWING:

CONCRETE CAST AGAINST EARTH:	3 INCH
ALL OTHER UNLESS SHOWN ON PLANS:	2 INCH

BEVEL ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS WITH ½" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND CONDUICT OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

THE RETAINING WALL MAXIMUM FOUNDATION PRESSURES ARE CALCULATED TO BE 1374 PSF FOR SERVICE LIMIT STATE BASED ON AN EFFECTIVE FOOTING WIDTH OF 8.8 FEET, AND 1822 PSF FOR STRENGTH LIMIT STATE BASED ON AN EFFECTIVE FOOTING WIDTH OF 8.7 FEET.

CONTACT THE GEOTECHNICAL ENGINEER AT LEAST 48 HOURS PRIOR TO EXCAVATING FOR THE RETAINING WALL FOOTING. THE ACTUAL DEPTH OF EXCAVATION WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER.

NO SCALE

FILE: Salt-Dome_Plan_007.dgn

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DATE

REVISION

NOVI

CITY OF

NOVI SALT DOME RECONSTRUCTION

RETAINING WALL BAR CHART & NOTES

JOB

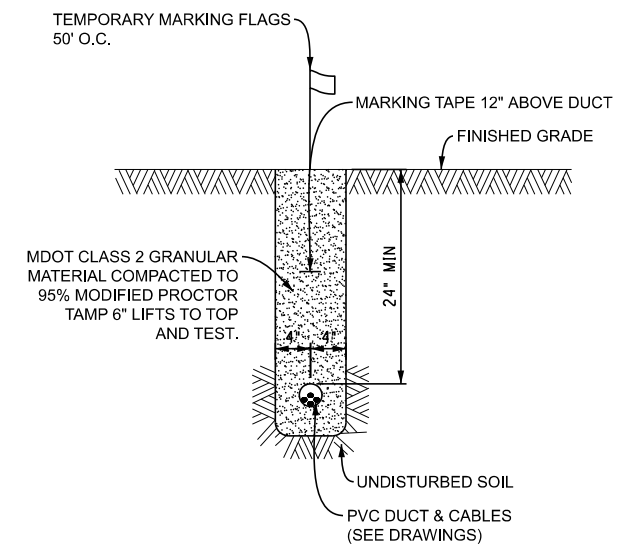
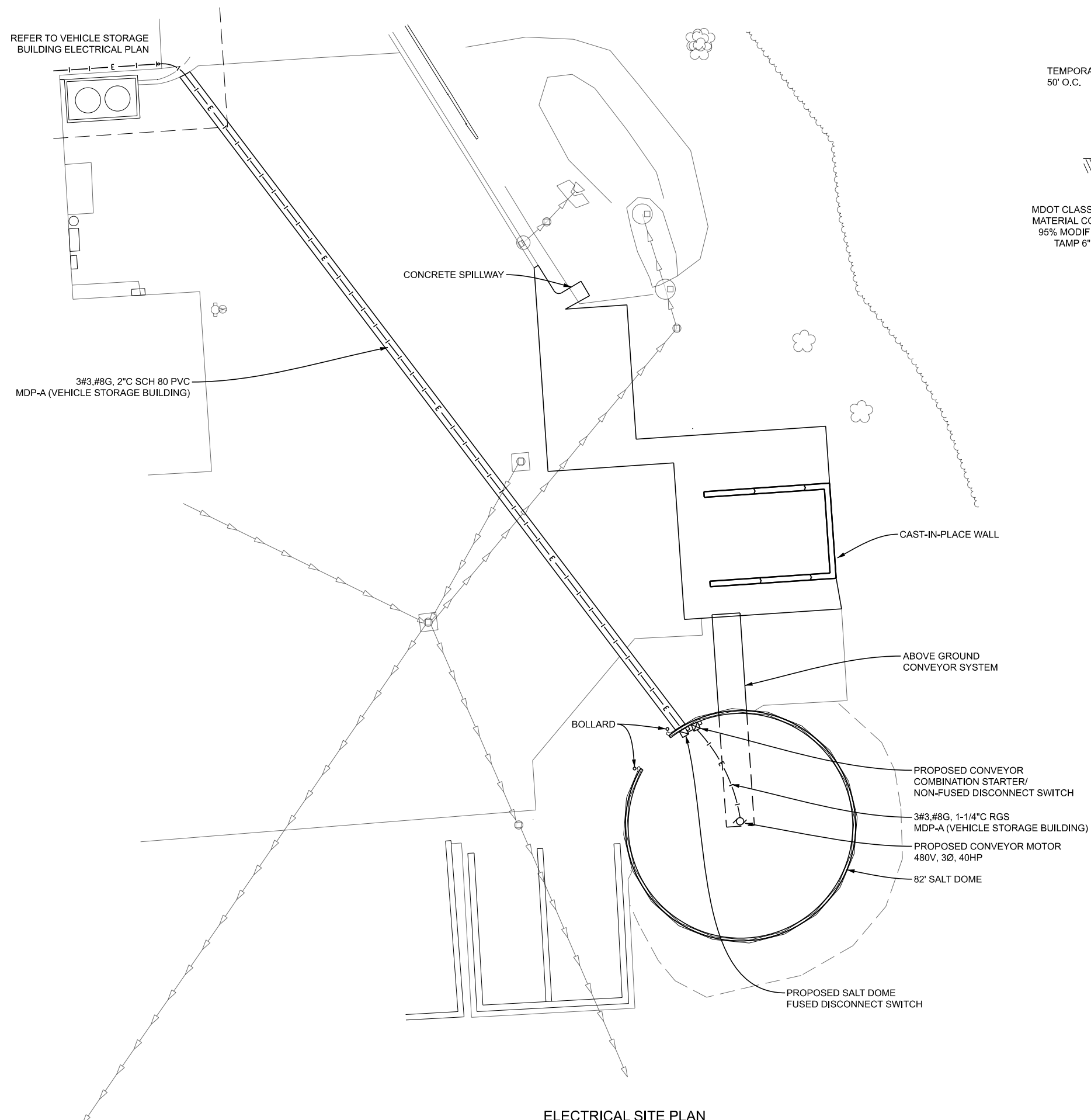
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SHEET

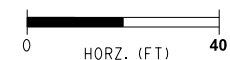
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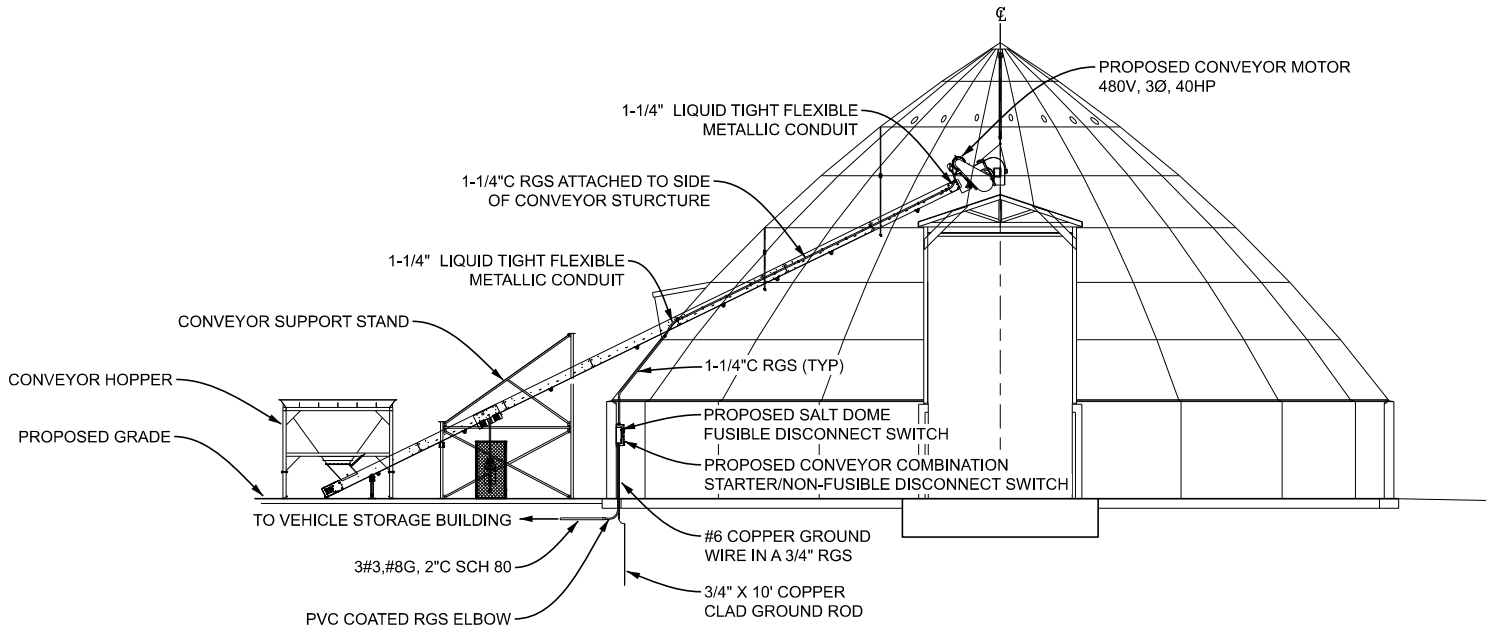


BURIED DUCTBANK
NOT TO SCALE

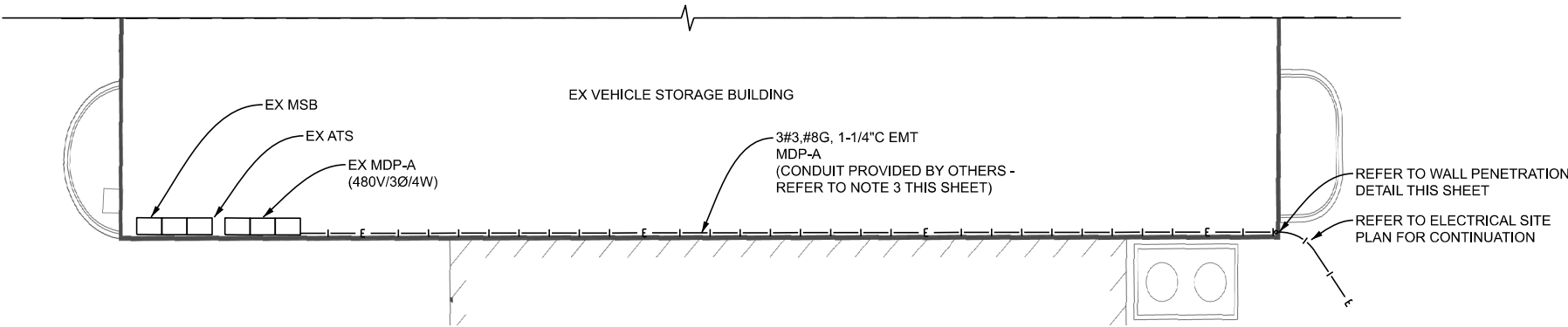
NOTE: CONTRACTOR CAN PLACE CONDUIT
AND CABLE USING A DIRECTIONAL BORE
METHOD IF PREFERRED.

ELECTRICAL SITE PLAN





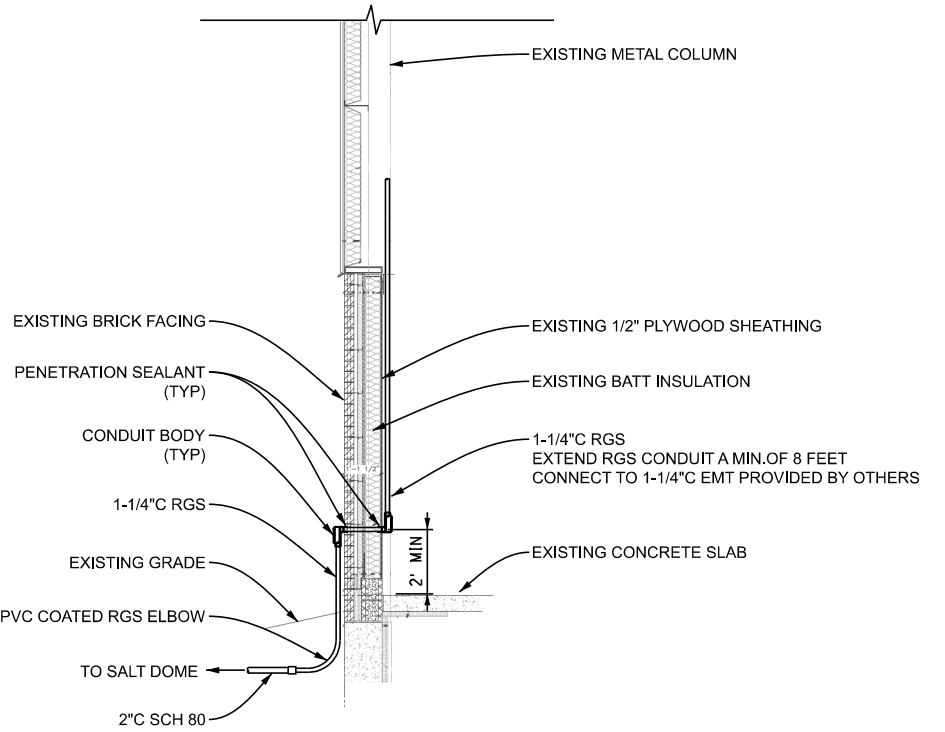
SALT DOME ELECTRICAL DETAIL
NOT TO SCALE
(EXAMPLE ONLY)



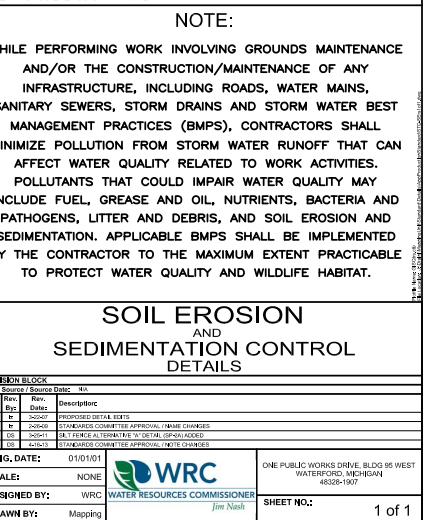
BUILDING ELECTRICAL PLAN VIEW
NOT TO SCALE

NOTES:

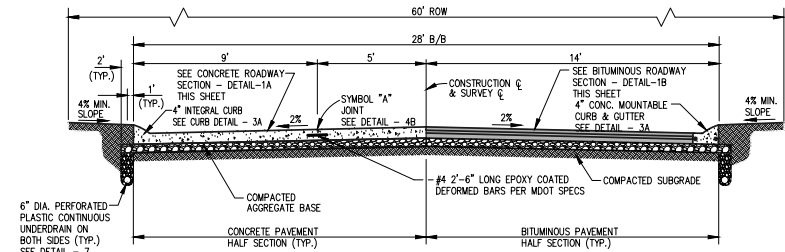
- EQUIPMENT ARRANGEMENT AND EXACT REQUIREMENTS INCLUDING CLEARANCES FOR ACCESS AND MAINTENANCE TO BE BASED ON CONVEYOR SYSTEM PROPOSED BY CONTRACTOR. COORDINATE ELECTRICAL REQUIREMENTS AND INSTALLATION WITH CONVEYOR CONTRACTOR. PROVIDE COMBINATION STARTER/DISCONNECT SWITCH, POWER, RACEWAY, AND INTERCONNECT WIRING AS REQUIRED FOR COMPLETE INSTALLATION.
- COORDINATE ALL SITE WORK WITH EXISTING UNDERGROUND UTILITIES.
- PROPOSED SALT DOME CONVEYOR SYSTEM TO MEET THE FOLLOWING ELECTRICAL REQUIREMENTS: 480V/3Ø WITH A MAXIMUM CIRCUIT SIZE OF 100A. CONVEYOR SYSTEM TO BE FED FROM THE EXISTING SQUARE D QED MAIN DISTRIBUTION PANEL "A" (MDP-A) LOCATED IN THE EXISTING VEHICULAR STORAGE BUILDING. OWNER TO PROVIDE A 100A FUSIBLE SWITCH & FUSES IN THE EX DISTRIBUTION PANEL AND INSTALL EMPTY RACEWAY FROM THE EX MDP-A TO THE INSIDE OF THE EXTERIOR WALL AS SHOWN ON THE PLANS. CONTRACTOR TO INSTALL WIRING. COORDINATE EXACT REQUIREMENTS WITH OWNER.
- INSTALL PROPOSED CONVEYOR ELECTRICAL RACEWAY FROM THE VEHICLE STORAGE BUILDING TO THE SALT DOME AS SHOWN ON THE PLANS. PROVIDE ALL NECESSARY RACEWAYS, BOXES, SLEEVES, FITTINGS, ETC AS REQUIRED FOR A COMPLETE SYSTEM INSTALLATION.
- SEAL ALL CONDUIT PENETRATIONS INTO BUILDING WITH A URETHANE FOAM SEALANT AROUND CONDUIT. CAULK ALL JOINTS FOR A WATERTIGHT SEAL. FIRESTOP ALL PENETRATIONS AS REQUIRED.
- PROVIDE A 600 VOLT RATED, HEAVY DUTY TYPE, FUSIBLE DISCONNECT SWITCH IN A NEMA 4X STANLESS STEEL ENCLOSURE FOR SALT DOME CONVEYOR SYSTEM. SAFTEY SWITCH TO BE NEMA SIZED FOR CONVEYOR MOTOR HORSEPOWER. SWITCH TO HAVE QUICK-MAKE, QUICK-BREAK OPERATING MECHANISM, INTERLOCKED HINGED COVER WITH BLADES VISIBLE IN THE "OFF" POSITION WITH COVER OPEN, PADLOCKABLE IN THE "OFF" AND "ON" POSITIONS AND HAVE CLASS R FUSE REJECTION CLIPS. SWITCH TO INCLUDE EQUIPMENT GROUND KIT. PROVIDE 80A DUAL-ELEMENT, TIME-DELAY CLASS RK5 FUESES.
- PROVIDE A 600 VOLT RATED, HEAVY DUTY TYPE, NON-REVERSING COMBINATION MAGNETIC MOTOR STARTER /NON-FUSIBLE DISCONNECT SWITCH IN A NEMA 4X STANLESS STEEL ENCLOSURE FOR SALT DOME CONVEYOR MOTOR. MAGNETIC STARTER TO HAVE 120V RATED COIL AND NEMA SIZED FOR MOTOR HORSEPOWER. SWITCH TO HAVE FLANGE-OPERATED HANDLE WITH BLADES VISIBLE IN THE "OFF" POSITION WITH DOOR OPEN. PADLOCKABLE IN THE "OFF" AND "ON" POSITIONS. STARTER TO INCLUDE HAND-OFF-AUTO SWITCH, RED PILOT LIGHT, AND START-STOP PUSH BUTTON IN COVER. PROVIDE ONE SET OF SPARE NORMALLY OPEN AND NORMALLY AUXILIARY CONTACTS IN ADDITION TO THE STANDARD CONTACTS SUPPLIED WITH THE STARTER. SIZE OVERLOAD RELAYS AT 125% OF MOTOR NAMEPATE RATED FULL-LOAD AMPS.
- CONDUCTORS TO BE STRANDED COPPER, WITH 600-VOLT INSULATION, RATED FOR 75-DEGREES C OPERATING TEMPERATURE, TYPE RHH/RHW. MINIMUM CONDUCTOR SIZE TO BE #12 AWG. EQUIPMENT GROUNDING CONDUCTOR TO INSULATED.
- IDENTIFY EQUIPMENT DISCONNECT SWITCH WITH A PERMANENT NAME PLATE PER NEC. NAME PLATE TO BE 1/8 INCH THICK , 5-PLY LAMACOID PLAQUE HAVING 3/4 INCH HIGH BLACK LETTERS ON A WHITE BACKGROUND.
- ALL WORK TO BE IN ACCORDANCE WITH ANSI/NFPA 70 (NATIONAL ELECTRICAL CODE) AND THE MICHIGAN ELECTRICAL CODE.



EXISTING BUILDING WALL PENETRATION DETAIL
NOT TO SCALE

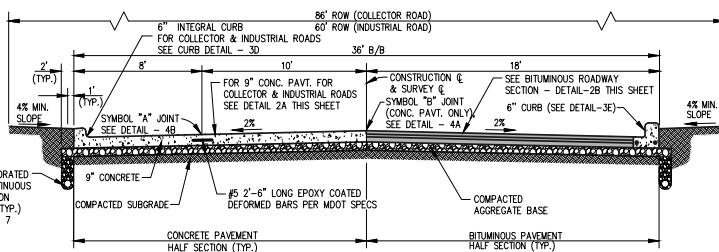
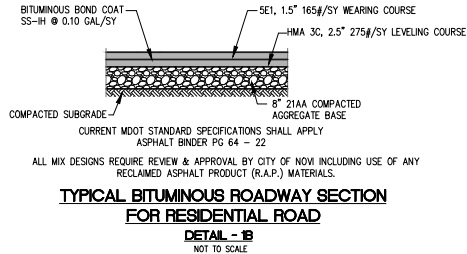
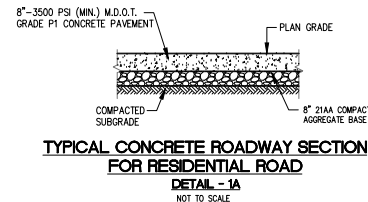


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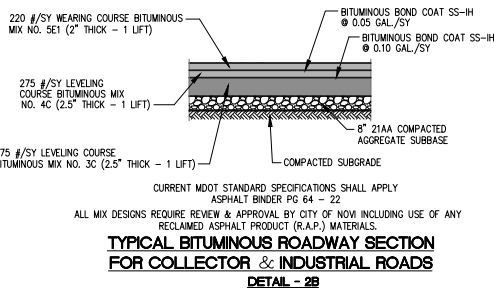
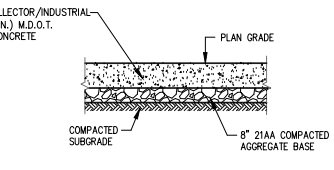


NOTE: CONCRETE PAVEMENT DETAIL SHOWN IS FOR A SINGLE POUR CONSTRUCTION. FOR A DOUBLE POUR CONSTRUCTION, A SYMBOL "B" JOINT WILL BE REQUIRED ALONG THE CENTER OF THE ROAD AND THE SYMBOL "D" JOINT WILL BE LOCATED 6' FROM BACK OF CURB.

**TYPICAL CROSS SECTION DETAIL - 1
RESIDENTIAL ROAD PAVEMENT (28' B/B)**
NOT TO SCALE



**TYPICAL CROSS SECTION DETAIL - 2
COLLECTOR AND INDUSTRIAL ROAD PAVEMENT (36' B/B)**
NOT TO SCALE



GENERAL NOTES

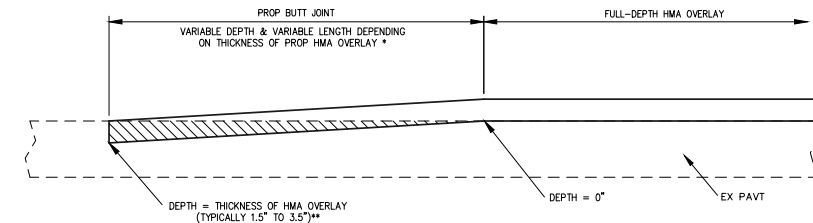
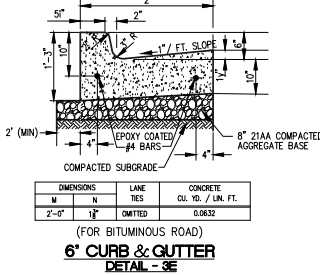
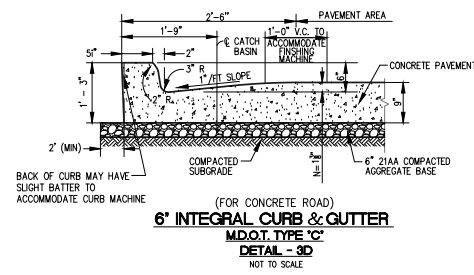
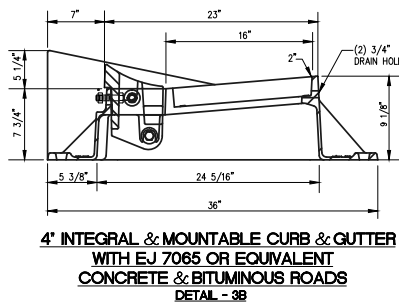
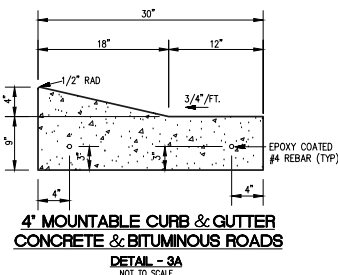
- EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS. TREE ROOTS SHALL BE COMPLETELY REMOVED.
- EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED 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 AS DIRECTED BY THE GEOTECHNICAL 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 AND TECHNICAL REPORTS TO THE CITY'S CONSULTANT.
- 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). THE BASE SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE BACK OF CURB OR THE PAVED 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 CITY OF NOVI, ROAD AND MDOT.
- FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.
- 1.0 INCH AND 2.0 INCH EXPANSION JOINTS SHALL BE INSTALLED PER CITY STANDARDS PER THIS SHEET.
- FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS TO 95% OF THE MAXIMUM DRY DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.
- 6' UNDER DRAIN SHALL BE INSTALLED ON BOTH SIDES OF ALL ROADWAYS IN GEOTEXTILE WRAPPED TRENCH. ALSO, PLACE UNDER DRAINS AT ALL DRAINAGE STRUCTURES WITHIN PARKING AREAS, (SEE DETAILS 6 AND 8).
- PRIOR TO BITUMINOUS STREET ACCEPTANCE, THE FULL CROSS SECTION MUST BE INSTALLED PER THE APPROVED PLAN; AND ANY AND ALL REPAIRS TO THE PAVEMENT AND CURB MUST BE COMPLETED AT THE DIRECTION OF THE CITY ENGINEER.
- 12a. AT THE TIME OF INITIAL ROAD CONSTRUCTION, THE FULL CROSS SECTION MAY BE INSTALLED TO MINIMIZE THE AMOUNT OF PAVEMENT AND CURB REPAIRS. PRIOR TO STREET ACCEPTANCE THE CITY ENGINEER WILL INSPECT THE PAVEMENT AND CURB, AND WILL IDENTIFY AREAS TO BE REPAIRED PRIOR TO THE INSTALLATION OF THE TOP COURSE.
- 12b. ALTERNATIVELY, THE TOP COURSE MAY BE OMITTED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. PRIOR TO STREET ACCEPTANCE, THE CITY ENGINEER WILL INSPECT THE BASE PAVEMENT AND CURB, AND WILL IDENTIFY AREAS TO BE REPAIRED PRIOR TO THE INSTALLATION OF THE TOP COURSE.
- PROVIDE MINIMUM 20' DISTANCE TO TRANSITION FROM DETAIL 3E TO DETAIL 3A CURBS.

CONCRETE PAVEMENT

- CONCRETE SHALL CONSIST OF: PORTLAND CEMENT TYPE I (AIR-ENTRAINED) WITH A MINIMUM 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.
- 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 CITY.
- NO CONCRETE PAVING SHALL BE ALLOWED PRIOR TO MAY 1, OR AFTER NOVEMBER 1 (UNLESS APPROVED BY THE CITY).
- DO NOT PLACE CONCRETE 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 CONCRETE WILL BE ACCORDING TO THE CURRENT MDOT SPECIFICATIONS. PAVING WILL NOT BE ALLOWED BELOW THESE MINIMUM TEMPERATURES, NOR WHEN FROST IS ON OR IN THE GRADE OR ON THE EXISTING SURFACE.

BITUMINOUS PAVEMENT

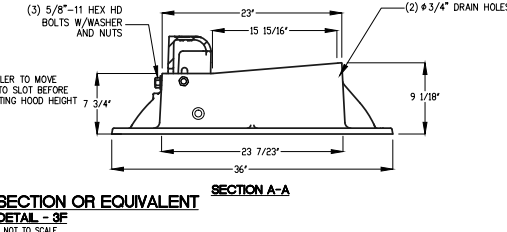
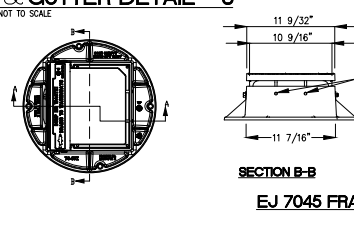
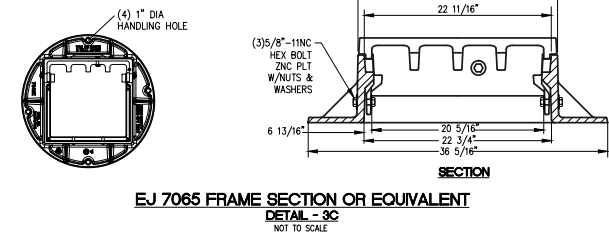
- BITUMINOUS MIXTURE SHALL CONSIST OF: LEVELING COURSE - MDOT BITUMINOUS MIXTURE NO. 3C; WEARING COURSE - MDOT BITUMINOUS MIXTURE NO. 4C; WEARING COURSE MDOT BIT MIX NO. 5E1. ASPHALT CEMENT PENETRATION GRADE 85-100 (PG 64-22) RECLAIMED ASPHALT PAVEMENT (RAP) SHALL BE REVIEWED FOR APPROVAL BY THE CITY NOV.
- ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY OF 92% OF THE FIELD CONTROL DENSITY AS DETERMINED BY THE THEORETICAL MAXIMUM DENSITY.
- A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN EACH COURSE OF PAVEMENT. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.10 GALLON/S.Y. BETWEEN LEVELING COURSES & 0.05 GALLON/S.Y. BETWEEN WEARING COURSE AND LEVELING COURSE.
- 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 THE CURRENT MDOT SPECIFICATIONS. PAVING WILL NOT BE ALLOWED BELOW THESE MINIMUM TEMPERATURES, NOR WHEN FROST IS ON OR IN THE GRADE OR ON THE EXISTING SURFACE.



* NOTE: PER MDOT ROAD DESIGN MANUAL, SECTION 6.03.11, IT IS RECOMMENDED TO MILL THE BUTT JOINT 25 FT FOR EVERY 0.75" OF OVERLAY THICKNESS. FOR EXAMPLE, A 3" OVERLAY WOULD REQUIRE A 100 FT LONG BUTT JOINT.
SIDE STREETS AND OTHER LOW-SPEED ROADWAYS COULD USE A SHORTER LENGTH FOR BUTT JOINTS, SUCH AS HALF OF THE ABOVE-LISTED FORMULA, OR AS DIRECTED BY THE ENGINEER.

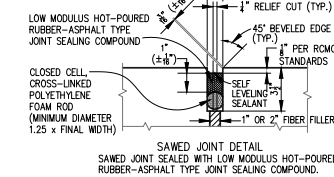
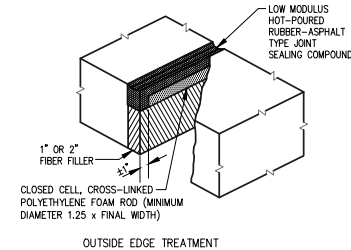
** NOTE: WHEN OVERLAYING EXISTING CONCRETE PAVEMENT, IT IS NOT RECOMMENDED TO MILL BUTT JOINT MORE THAN 1.5-2" DEEP SO REINFORCEMENT (IF PRESENT) WILL NOT BE EXPOSED.

**TERMINAL BUTT JOINT
DETAIL - 5**
NOT TO SCALE

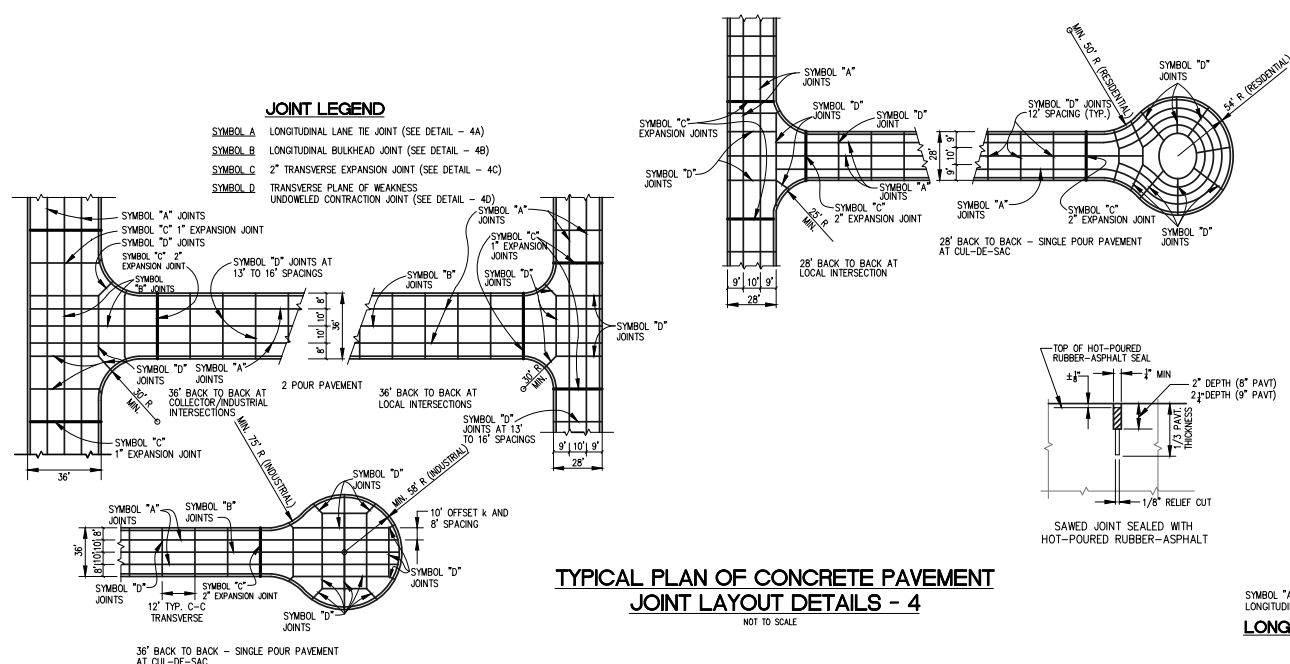
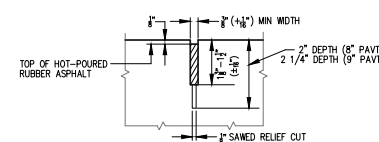


EJ 7065 FRAME SECTION OR EQUIVALENT DETAIL - 3C

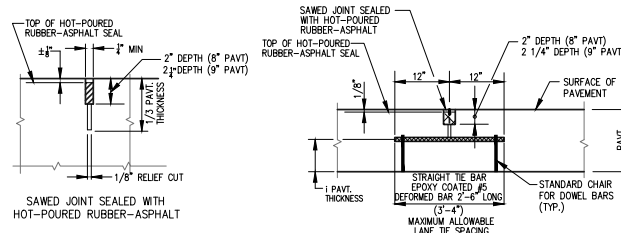
- NOTES:
- THE INTERSECTION SHALL BE POURED INDEPENDENT OF THE STRAIGHTWAY FROM RADII TO RADII.
 - JOINT DESIGN SHALL BE IN ACCORDANCE WITH ROAD COMMISSION FOR OAKLAND COUNTY STANDARDS AND SPECIFICATIONS UNLESS SUPERCEDED BY CITY OF NOVI STANDARD DETAILS.
 - DOWEL BASKETS WILL BE REQUIRED AT ALL EXPANSION JOINTS AS DIRECTED BY THE CITY ENGINEER.
 - IF STRUCTURES ARE LOCATED AT POINT OF CURVE THEN EXPANSION JOINT SHOULD BE RELOCATED 10' OFF. (OR AS DIRECTED BY THE CITY ENGINEER.)



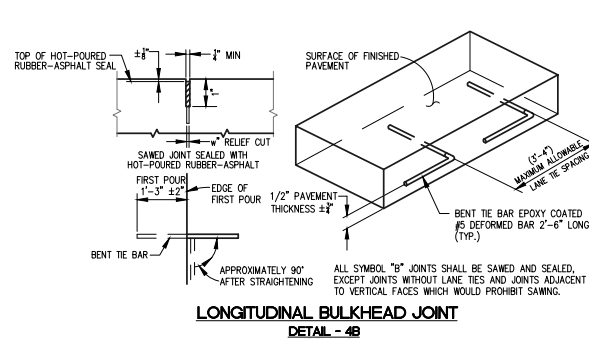
**TRANSVERSE EXPANSION JOINT
DETAIL - 4C**
NOT TO SCALE



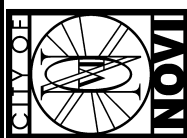
**TYPICAL PLAN OF CONCRETE PAVEMENT
JOINT LAYOUT DETAILS - 4**
NOT TO SCALE



**LONGITUDINAL LANE TIE JOINT
DETAIL - 4A**
NOT TO SCALE



**LONGITUDINAL BULKHEAD JOINT
DETAIL - 4B**
NOT TO SCALE



CITY OF NOVI 145175 WEST 10 MILE ROAD | NOVI, MI 48375 | P (248) 347-0456 | WWW.CITYOFNOVI.ORG

SCALE: H: N.T.S. V: N.T.S.

COUNTY: OAKLAND COUNTY DATE: 0/0/2017

TOWN: IN RANGE: SE SPALING DECKER

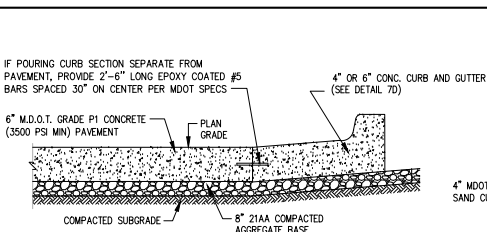
CITY OF NOVI PAVING STANDARD DETAILS

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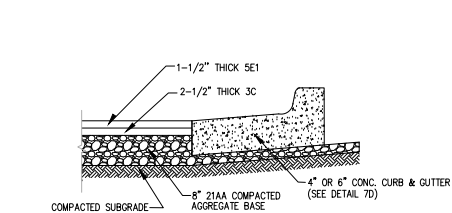
UNDER DRAIN NOTES

1. UNDER DRAIN SHALL BE PLACED PER CITY STANDARDS ALONG THE ENTIRE LENGTH OF CURB (BOTH SIDES).
2. UNDER DRAIN TO BE 6" UNWRAPPED PERFORATED HOPE ADS N-12 (OR APPROVED EQUAL) AASHTO M 278, WITH PERFORATIONS MEETING AASHTO M 278.
3. ALL UNDER DRAIN SHALL BE INSTALLED AT A SUITABLE SLOPE FOLLOWING THE GRADE OF THE ROAD. INSTALLATION BEGINS FROM THE OUTLET, THEN PROCEEDING UPSTREAM.
4. UNDERDRAIN TRENCH SHALL BE WRAPPED IN GEOTEXTILE FABRIC.
5. PROPOSED UNDER DRAIN PIPE LAYOUT, FLOW LINE ELEVATION AND DETAILS SHALL BE APPROVED PRIOR TO CONSTRUCTION.
6. LOCATION MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
7. ALL UNDERDRAIN SHALL BE APPROVED PLASTIC PIPE PER MDT SECTION 908.07. METAL PIPE SHALL NOT BE USED.
8. ALL UNDERDRAIN SHALL OUTLET TO A DRAINAGE STRUCTURE.

TYPICAL UNDER DRAIN DETAILS - 6



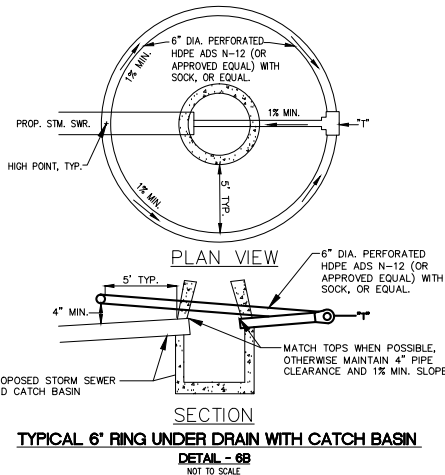
**TYPICAL CONCRETE PAVEMENT
INTEGRAL WALK/CURB
DETAIL - 7A**
NOT TO SCALE



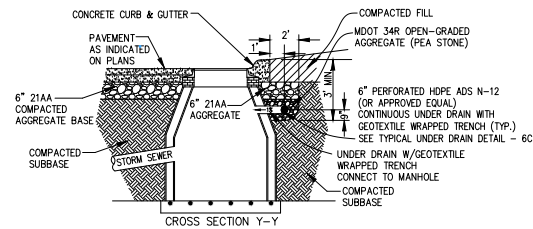
**MINIMUM BITUMINOUS PARKING SECTION
DETAIL - 7C**
NOT TO SCALE



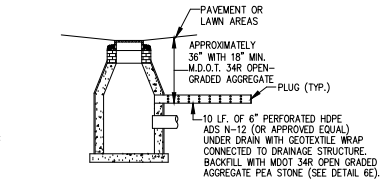
TYPICAL PARKING AREA PAVEMENT & CURB DETAILS - 7



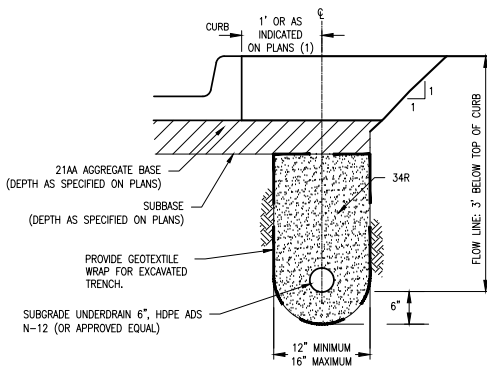
**TYPICAL 6" RING UNDER DRAIN WITH CATCH BASIN
DETAIL - 8B**
NOT TO SCALE



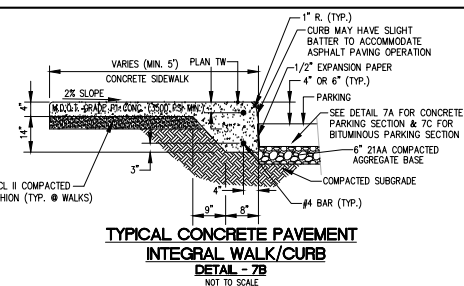
**TYPICAL UNDER DRAIN WITH CATCH BASIN
ALONG ROADWAY CURB & GUTTER
DETAIL - 8C**
NOT TO SCALE



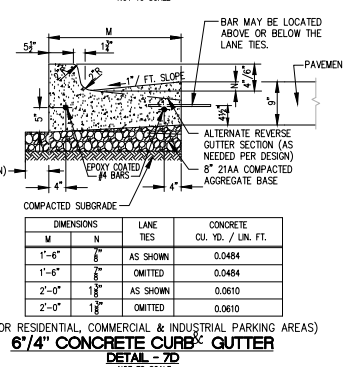
**TYPICAL 6" FINGER TYPE
UNDERDRAIN WITH CATCH BASIN
(WITHIN PARKING LOTS OUTSIDE CURB LINES)
DETAIL - 8D**
NOT TO SCALE



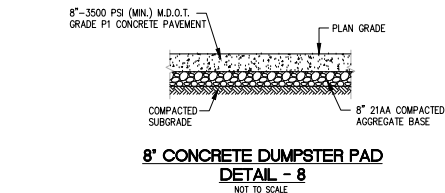
**TYPICAL UNDER DRAIN ALONG ROADWAY
CURB & GUTTER SECTION
DETAIL - 8E**
NOT TO SCALE



**TYPICAL CONCRETE PAVEMENT
INTEGRAL WALK/CURB
DETAIL - 7B**
NOT TO SCALE



**6 1/4" CONCRETE CURB & GUTTER
DETAIL - 7D**
NOT TO SCALE



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

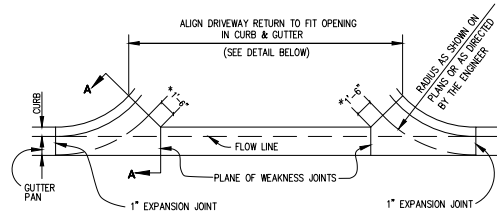
NOTE: DUMPSTER PAD SHALL EXTEND MIN. 10' BEYOND DUMPSTER ENCLOSURE OPENING.

SIWALK JOINTS NOTES

1. CONSTRUCT TRANSVERSE AND LONGITUDINAL EXPANSION AND PLANE OF WEAKNESS JOINTS AT INTERVALS AND LOCATIONS SHOWN ON THE PLANS. ALIGN TRANSVERSE JOINTS WITH LIKE 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" INCH TO 1/4" INCH WIDE. PATHWAY (MATERIAL AS SPECIFIED).
4. PLACE 1/2" 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 1/2" 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.

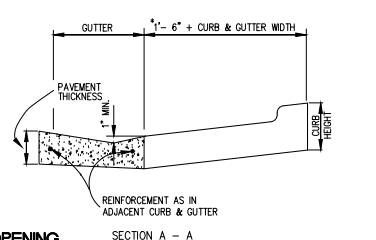
SIWALK STANDARD NOTES

1. SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, 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 RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. HANDICAP RAMPS SHALL MEET CURRENT MDT STANDARDS AND A.D.A. BARRIER FREE REQUIREMENTS.
3. RAMPS 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 RAMPS, 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 THROUGH 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 OF UNIFORM TRAFFIC CONTROL DEVICES".
11. DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP.



**TYPICAL 8" CONCRETE DRIVEWAY
APPROACH PAVEMENT SECTION
DETAIL - 9B**
NOT TO SCALE

TYPICAL COMMERCIAL/INDUSTRIAL DRIVEWAY APPROACH DETAILS - 9



**TYPICAL BITUMINOUS DRIVEWAY
APPROACH PAVEMENT SECTION
DETAIL - 9C**
NOT TO SCALE

PATHWAY STANDARD NOTES

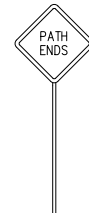
1. THE MAXIMUM GRADE ALONG PATHWAY SHALL NOT EXCEED 1 ON 12.
2. PROVIDE 2% MAXIMUM CROSS SLOPE (I.E. SUPER ELEVATION) FOR DRAINAGE OFF AND AWAY FROM PATHWAY AND GRADED SHOULDERS.
3. PROVIDE MINIMUM 95' CENTER LINE RADIUS FOR PATHWAY HORIZONTAL ALIGNMENT.
4. PROVIDE A MINIMUM OF 3' HORIZONTAL CLEARANCE 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.
5. PROVIDE HANDICAP ACCESSIBLE RAMPS AT EXISTING PAVED DRIVEWAYS IN GOOD CONDITION AND AT STREET INTERSECTIONS.
6. PATHWAY RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MDT STANDARD PLAN R-28 SERIES.
7. A CLEAN SAW CUT JOINT SHALL BE PROVIDED WHEREVER NEW PAVEMENT MATCHES EXISTING PAVEMENT.
8. UTILITY STRUCTURES SHALL BE ADJUSTED IN ACCORDANCE WITH CITY OF NOVI STANDARDS AND SHALL MATCH THE PROPOSED GRADE OF THE PATHWAY.
9. PROVIDE 10' BETWEEN EDGE OF PATHWAY TO TOP OF BANK FOR DETENTION BASINS, OPEN DRAINS, ETC.
10. ADJACENT FINISHED GRADE SHALL BE SET 2" BELOW TO ACCOMMODATE SOD.

BITUMINOUS PATHWAY NOTES

1. IF PATHWAY CROSSES A RESIDENTIAL DRIVEWAY, INCREASE THE THICKNESS OF BITUMINOUS LEVELING/BASE COURSE MIX 36A TO 4" (Ø 440#/SYD).
2. PATHWAY SHALL BE UNIFORM FREE OF BIRD BATHS - STANDING WATER

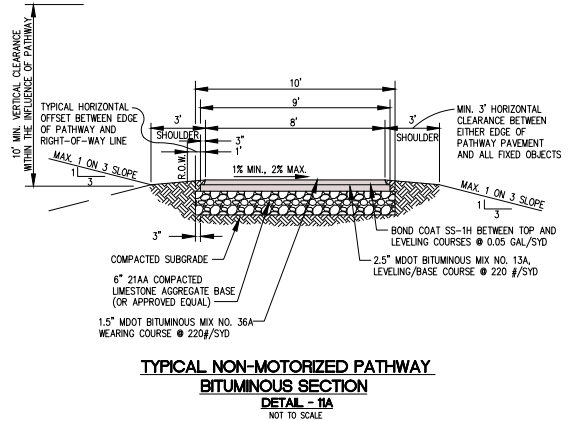
CONCRETE PATHWAY NOTES

1. FOR CONCRETE PATHWAY PROVIDE TRANSVERSE PLANE OF WEAKNESS SAW CUT JOINTS AT APPROXIMATELY 8' INTERVALS. SAW 1/2" WIDE x 1" DEEP JOINTS AND DO NOT SEAL THE JOINTS. TOOLED JOINTS ARE NOT ACCEPTABLE.
2. PROVIDE FULL DEPTH TRANSVERSE EXPANSION JOINTS, BY INSTALLING 3/4" INCH THICK PREMOLDED JOINT FILLER SET 1/2" BELOW THE SURFACE OF THE CONCRETE IN THE JOINTS AT 50' INTERVALS (MAX.).
3. 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 PATHWAY.
4. PLACE 1" FIBER EXPANSION JOINT FILLERS AT EACH SIDE OF DRIVE.
5. PROVIDE 1" FIBER EXPANSION JOINT FILLERS AT CURB AND BUILDING OR R.O.W. LINE.
6. AT DRIVEWAYS WITH CURB & GUTTER, PROVIDE CURB DROP PER MDT STANDARD PLANS R-29-D, DETAIL "1", EXCEPT, REPLACE 1" RISE AT BACK OF GUTTER BY A ROUNDED VALLEY AS SHOWN ON THE SIDEWALK RAMP DETAIL.
7. AT UNPAVED DRIVE OR PAVED DRIVE WITH POOR CONDITION, INCREASE THE SLAB THICKNESS TO 6" OR EXISTING SLAB THICKNESS WHICHEVER IS LARGER.
8. PROVIDE 10' BETWEEN EDGE OF PATHWAY TO TOP OF BANK FOR DETENTION BASINS, OPEN DRAINS, ETC.
9. ADJACENT FINISHED GRADE SHALL BE SET 2" BELOW TO ACCOMMODATE SOD.

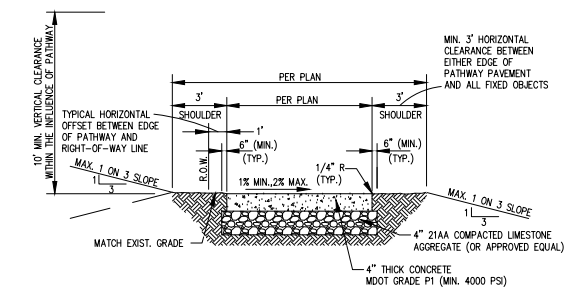


- NOTE:
1. SIGNS SHALL BE 18"x18" AND CONSTRUCTED OF 0.63 ENGINEERING GRADE REFLECTIVE ALUMINUM WITH 1/2" RADIUS AT CORNERS.
 2. SIGNS SHALL HAVE A YELLOW BACKGROUND WITH BLACK COPY AND BLACK OUTLINE.
 3. SIGN POST AND FASTENERS SHALL BE PER M.A.U.T.C.D. (MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES)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

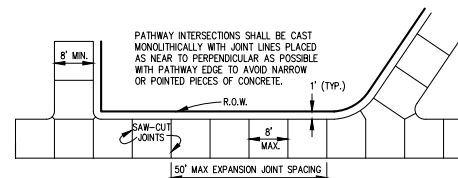
**TYPICAL NON-MOTORIZED
PATHWAY SIGNAGE
DETAIL - 10C**
NOT TO SCALE



**TYPICAL NON-MOTORIZED PATHWAY
BITUMINOUS SECTION
DETAIL - 11A**
NOT TO SCALE

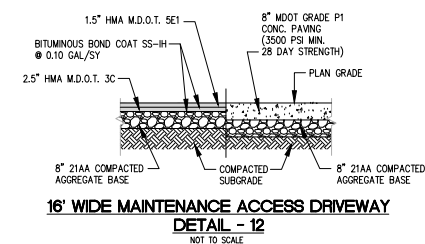


**TYPICAL NON-MOTORIZED
PATHWAY/SIDEWALK CONCRETE SECTION
DETAIL - 11B**
NOT TO SCALE

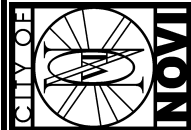


**TYPICAL CONCRETE PATHWAY JOINT LAYOUTS
DETAIL - 10D**
NOT TO SCALE

TYPICAL NON-MOTORIZED PATHWAY DETAILS - 11



**16' WIDE MAINTENANCE ACCESS DRIVEWAY
DETAIL - 12**
NOT TO SCALE



CITY OF NOVI 145175 WEST 10 MILE ROAD NOVI, MI 48375 P (248) 347-0456 I WWW.CITYOFNOVI.ORG

DATE: 3/05/2018

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CITY OF NOVI
PAVING
STANDARD DETAILS