City of North Royalton

Mayor Larry Antoskiewicz

Community Development, Building Division
Dan Kulchytsky Building Commissioner

11545 Royalton Road, North Royalton, OH 44133

Phone: 440-582-3001 Fax: 440-582-3089

CITY OF NORTH ROYALTON PLANNING COMMISSION APPLICATION

1. This request is made for the following property:

Angelina Drive, North Royalton, OH 44133
Address

Name of Occupant, Business or Tenant (if applicable)

488-12-033 (Block I) & 488-12-035 (Block H)
Permanent Parcel Number

R1-A
Zoning District and Ward

2. Property Owner of Parcel:

Jeff Rucinski
Name

JMR Land Development, LLC
Name of Business (if applicable)

8322 Windsor Way
Address

216-272-5385
Phone

Broadview Heights, OH 44147
City, State and Postal Code

toptierhockey@gmail.com
Email (electronic mail)

3. This request is being made by the following responsible party (Owner / Authorized Representative):

Jeff Rucinski
Name

JMR Land Development, LLC
Name of Business (if applicable)

8322 Windsor Way
Address

216-272-5385
Phone

Broadview Heights, OH 44147
City, State and Postal Code

toptierhockey@gmail.com
Email (electronic mail)

RECEIVED
CITY OF NORTH ROYALTON
SEP 03 2021
☒ P.C. ☐ B.Z.A

For Office Use Only

8-3-21
Date Application Submitted

10-6-21
Meeting Date Assigned

PC21-
Identification Number Assigned

$70
Application Fee

9-3-21 ck #1580
Payment Information (date, check number, cash, etc.)

Application Fee Received By

Other Application Fee Information

4. **Narrative statement describing the project and its features:**
To fully develop the remaining vacant land at Huntington Park Subdivision - phase 4 extension. Consisting of seven (7) additional sublots to be included in the existing Huntington Park Homeowners Association.

5. **Applicant's Plan Request:** (please mark appropriate box)

Commercial / Industrial / Residential:

- Preliminary Site Plan Approval
- Final Site Plan Approval

Subdivision:

- Sketch Plan Approval
- Preliminary Site Plan Approval
- [X] Final Site / Preliminary Plat Approval
- Final Plat / Dedication Approval

The Planning Commission or its agent(s) is hereby authorized to enter upon the property for which his approval is sought, without further notification, to inspect said property. Any such inspection shall be conducted between the hours of 9 a.m. and 5 p.m. on any day of the week, including weekends.

I further understand that any misrepresentation of data or facts or violations of the Ordinances of the City of North Royalton are cause for refusal, suspension or revocation of this license if issued.

Applicant Signature	JEFF RUCINSKI Printed Name and Title	09-03-21 Date
Owner Signature	JEFF RUCINSKI Printed Name and Title	09-03-21 Date

CITY OF NORTH ROYALTON PLANNING COMMISSION APPLICATION

6. Written Authority Form (complete this form if you are unable to be present at meeting). (submit original – do not fax or email)

I, _____ (name) of _____ (company, if applicable), hereby certify that I/we are the _____ (owner(s), executor(s), etc.) of _____ (property address or permanent parcel number) and further verify that _____ **(name of representative)** is authorized to represent my/our interests and make decisions on my/our behalf when appearing before the North Royalton Planning Commission.

_____ _____
Signature Date

Before me, a Notary Public in and for said county, personally appeared _____ who acknowledged that he or she did sign the foregoing instrument and the same is his or her free act and deed.

In testimony where of I have hereunto set my hand and official seal at _____, Ohio on this _____ day of _____, 20_____.

_____
Notary Signature

Seal:

State of Ohio
County of Cuyahoga

DRAWN BY:	XXX	2021-09-02
CHECKED BY:	XXX	2021-09-02

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

IMPROVEMENT PLANS
FOR

HUNTINGTON PARK PHASE 4

PROPOSED 7 SUBLOTS
CONTINUATION OF ANGELINA DRIVE
CITY OF NORTH ROYALTON
CUYAHOGA COUNTY, OHIO

LOCATION MAP
(N.T.S.)
LATITUDE: 41°19'40" N
LONGITUDE: 81°42'53" W

N

SUBMITTAL INDEX

SUBMITTAL	DATE
1	8/20/2021

IMPROVEMENT PLAN INDEX

SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
2	GENERAL NOTES
3	EXISTING CONDITIONS
4	OVERALL SITE PLAN
5	UTILITY PLAN
6	MASS GRADING PLAN
7	FINAL GRADING PLAN
8	INTERSECTION DETAILS
9	PLAN AND PROFILE WATER
10	PLAN AND PROFILE SANITARY
11	PLAN AND PROFILE STORM
12	WATER NOTES & DETAILS
13	WATER NOTES & DETAILS
14	STORM & SANITARY NOTES & DETAILS
15	STORM & SANITARY NOTES & DETAILS
16	PAVEMENT DETAILS
17	PAVEMENT DETAILS

Utility Symbol Legend

Existing	Proposed	Description
(CB) [CB]	(CB) [CB]	Catch Basin
		Fire Hydrant
		Inlets
		Light Pole
MB	MB	Mailbox
P	P	Power Pole
		Sanitary Manhole
┤ H	┤ H	Signs
		Storm Manhole
W	W	Water Gate Valve
WS	WS	Water Service Stop

Utility Line Legend

Existing	Proposed	Description
OHE	OHE — OHE	Overhead Electric Line
E	E — E — E	Underground Electric Line
G	G — G — G	Underground Gas Line
S	S — S	Sanitary Sewer Line
SAN FM	SAN FM	Sanitary Sewer Forcemain
W	W — W — W	Water Line
		Utility Easement
Ex R/W	R/W — R/W	Right of Way
	U — U — U	Storm Water Management Easement

BENCHMARKS

BENCHMARK #1: FIRE HYDRANT NORTH FLANGE BOLT
STA. 20+38.60, 17.49R ELEV= 1234.48'

BENCHMARK #2: EXISTING SANITARY MANHOLE
STA. 21+88.19, 19.63L ELEV= 1231.56'

CHRISTOPHER M. SCHMIDT, P.E. 80749 DATE

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED
PROFESSIONAL ENGINEER

APPROVALS

CITY OF NORTH ROYALTON ENGINEER DATE

OHIO EPA PERMIT TO INSTALL LETTER DATED: XX/XX/XXXX
OHIO EPA WATER PERMIT LETTER DATED: XX/XX/XXXX
OHIO EPA NPDES (#3GC10708*AG) PERMIT LETTER DATED: XX/XX/XXXX
CLEVELAND WATER APPROVAL SET SIGNED: XX/XX/XXXX
CUYAHOGA SWCD APPROVAL LETTER DATED: XX/XX/XXXX

SWPPP SHEET INDEX

SHEET NUMBER	SHEET TITLE
18	SWPPP TITLE SHEET
19	STORMWATER POLLUTION PREVENTION PLAN
20	POND 1 DETAIL
21	SWPPP NOTES
22	SWPPP NOTES & DETAILS
23	SWPPP NOTES & DETAILS
24	SWPPP LOGS

UTILITY SUMMARY TABLE

DESCRIPTION	QUANTITY
15" STORM (HDPE)	614 LF
12" STORM (HDPE)	242 LF
12" STORM (RCP)	350 LF
STORM MANHOLE	2 EA
STORM CATCH BASIN	1 EA
STORM YARD DRAIN	3 EA
HALF-HEIGHT HEADWALL	1 EA
8" SANITARY (PVC)	273 LF
SANITARY MANHOLE	1 EA
8" DI CL-52 WATER MAIN	190 LF
4" DI CL-52 WATER MAIN	306 LF
8" DI CL-52 45° BEND	1 EA
4" DI CL-52 45° BEND	6 EA
4" DI CL-52 22.5° BEND	4 EA
8"x4" DI CL-52 TEE	1 EA
6" HYDRANT ASSEMBLY	1 EA

SITE INFORMATION

-SITE AREA: 13.17 AC
-TOTAL PROPOSED LOTS: 7
-STREET WIDTH: 25 FT
-ROADWAY LENGTH: 216 LF

ZONING INFORMATION

R1-A: ONE FAMILY

-MIN. LOT AREA: 20,000 SF
-FRONT YARD SETBACK: 50' AVG (45'-55')
-REAR YARD SETBACK: 50'
-SIDE YARD SETBACK: 10'

DEVELOPER

JMR LAND DEVELOPMENT, LLC
8322 WINDSOR WAY
BROADVIEW HEIGHTS, OH 44147

CONTACT: JEFF RUCINSKI
216-272-5385

DESIGN ENGINEER

DAVEY RESOURCE GROUP
1310 SHARON COPLEY ROAD
P.O. BOX 37
SHARON CENTER, OHIO 44274

CONTACT: CHRIS SCHMIDT, P.E.
330-590-8004

CONTRACTOR

TBD

OGPUPS
Ohio Oil & Gas Producers Underground Protection Service
800-925-0988 or 8-1-1
www.ogpups.org

Ohio Utilities Protection Service
Call Before You Dig
1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

HUNTINGTON PARK PHASE 4
TITLE SHEET

PROJECT NUMBER	1966
DATE	2021-09-02

GENERAL NOTES

WORK HOURS
8:00AM - 8:00PM MONDAY THRU FRIDAY; 8:00AM - 5:00PM SATURDAY, NO WORK SUNDAY, PER SECTION 634.04 OF THE CITY OF NORTH ROYALTON CODIFIED ORDINANCES

PRE-CONSTRUCTION CONFERENCES
AT LEAST FIVE DAYS PRIOR TO THE ACTUAL START OF CONSTRUCTION WORK A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE DIRECTION OF THE CITY OF NORTH ROYALTON ENGINEER, ALL APPROPRIATE CITY OF NORTH ROYALTON OFFICIALS, AND THE OWNER'S ENGINEER. THE CONTRACTOR OR HIS AUTHORIZED SUPERINTENDENT SHALL BE PRESENT ALONG WITH ANY AND ALL PRIVATE UTILITY COMPANY REPRESENTATIVES. THIS MEETING WILL BE FOR COORDINATION AND PROCEDURE REVIEW PRIOR TO COMMENCING ANY PHYSICAL WORK.

THE CONTRACTOR SHALL NOTIFY THE NORTH ROYALTON POLICE AND ENGINEERING DEPARTMENTS A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING STARTED.

INSPECTION
THE COST OF ALL INSPECTION, PERMITS AND TESTS SHALL BE PAID BY THE CONTRACTOR AND INCLUDED IN THE UNIT PRICES BID. UNLESS NOTED OTHERWISE THE INITIAL PAYMENT FOR INSPECTION OR TESTING BY THE CITY OF NORTH ROYALTON OR ITS AGENTS SHALL BE PAID FROM A DEPOSIT MADE THE OWNER TO THE CITY OF NORTH ROYALTON. BUT BY VERIFICATION OF INVOICE FROM THE CITY OF NORTH ROYALTON THESE FEES WILL BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR. NO FINAL ESTIMATE WILL BE ISSUED UNTIL ALL FEES FOR INSPECTION AND TESTING HAVE BEEN INVOICED BY THE CITY OF NORTH ROYALTON OR ITS AGENTS.

THE CONTRACTOR SHALL NOT COMMENCE WITH ANY FORM OF CONSTRUCTION WITHOUT CONTACTING THE OFFICES OF THE CITY OF NORTH ROYALTON ENGINEER AND THE CITY OF CLEVELAND DIVISION OF WATER TO ARRANGE FOR INSPECTION. IF ANY CHANGE IN THE WORK SCHEDULE BECOMES NECESSARY, IT WILL BE TO AVOID ANY UNNECESSARY INSPECTION COSTS. IF NO MODIFICATION IS MADE IN REGARDS TO CANCELLATION OF WORK, THE CONTRACTOR WILL BE CHARGED FOR THE INSPECTION TIME INCURRED.

THE FIELD INSPECTOR DOES NOT HAVE THE AUTHORITY TO APPROVE CHANGES. ANY CHANGES TO THESE PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL. APPROVAL OF SUCH CHANGES BY THE CITY ENGINEER SHALL BE IN WRITING. ANY VARIANCE FROM THESE PLANS WITHOUT WRITTEN APPROVAL WILL VOID THE CITY APPROVAL.

NO OPEN CUTTING OF ANY EXISTING STREET PAVEMENT SHALL BE PERMITTED.

NO DIVERSION OF STORM WATER SHALL BE PERMITTED.

ALL UNDERGROUND INFORMATION IS TAKEN FROM RECORDS AND IS NOT GUARANTEED.

PRECAUTION AGAINST UTILITY DAMAGE
THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AT NO EXPENSE TO THE OWNER TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITY LINES DURING THE INSTALLATION OF THE PROPOSED IMPROVEMENTS. IT MAY BE NECESSARY TO CHANGE THE ALIGNMENT OR THE FLOW LINE ELEVATION OF PROPOSED SEWERS DUE TO VARIOUS EXISTING UTILITY LINES WITH APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL MAKE INVESTIGATIONS TO DETERMINE THE LOCATION OF EXISTING UTILITY LINES PRIOR TO THE INSTALLATION OF THE PROPOSED IMPROVEMENTS. SUCH INVESTIGATIONS SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

CONSTRUCTION AND MATERIAL SPECIFICATION
MATERIAL AND/OR WORKMANSHIP SHALL FOLLOW "STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS", DATED JANUARY 1, 2005 OR ANY SUBSEQUENT ISSUES THEREOF. THROUGHOUT THE PLANS REFERENCE TO SPECIFIC ODOT ITEM NUMBERS ARE INDICATED. MATERIAL AND WORKMANSHIP SHALL ALSO CONFORM TO THE LATEST EDITION OF THE CODIFIED ORDINANCES OF NORTH ROYALTON. WHERE CONFLICTS OCCUR IN THE ABOVE, THE ENGINEER OF THE CITY OF NORTH ROYALTON SHALL DETERMINE THE GOVERNING AUTHORITY. ANY DEFECTS IN THE CONSTRUCTION INCLUDING MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE CITY ENGINEER. REFERENCE THROUGHOUT THESE PLANS TO "THE ENGINEER" SHALL BE TO THE OWNER'S ENGINEER. "CITY ENGINEER" SHALL BE THE ENGINEER OF THE CITY OF NORTH ROYALTON.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THE SAFETY OF THE EMPLOYEES AND THE WORKSITE AS PER ACCEPTED SAFETY REGULATIONS.

THE CONTRACTOR SHALL PROVIDE TEMPORARY SANITARY FACILITIES AT ALL TIMES DURING CONSTRUCTION.

THE DEVELOPER IS REQUIRED TO SUPPLY ALL STREET SIGNS PER THE CODIFIED ORDINANCES OF NORTH ROYALTON, OHIO OR AS DIRECTED.

AFTER CONSTRUCTION, THE DEVELOPER SHALL SUBMIT AS-BUILT DETENTION BASIN VOLUME CALCULATIONS AND INCLUDE AS-BUILT TOPOGRAPHY AND AS-BUILT SPOT ELEVATIONS FOR THE NEW POND. ALL OUTLET STRUCTURE ELEVATIONS AND SPILLWAY ELEVATIONS SHALL BE INCLUDED. A STATEMENT BY A STATE OF OHIO REGISTERED PROFESSIONAL ENGINEER SHALL BE INCLUDED WITH THE AS-BUILT DETENTION VOLUME CALCULATIONS CERTIFYING THE POND HAS BEEN CONSTRUCTED PER THE APPROVED PLAN AND CALCULATIONS.

AS-BUILT DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE CITY ENGINEER BEFORE DEDICATION OF THE RIGHT-OF-WAY.

TRAFFIC CONTROL NOTES
TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

THE CONTRACTOR SHALL SCHEDULE OPERATIONS AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE LEAST DISTURBANCE AND/OR INTERFERENCE WITH NORMAL FLOW OF TRAFFIC.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND MAINTENANCE OF BARRICADES, WARNING LIGHTS, OR OTHER EQUIPMENT NECESSARY FOR SAFETY, CONTROL OF TRAFFIC, AND THE PROTECTION OF THE WORK AREA FROM ALL DAMAGE.

FOR ANY WORK DONE IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR IS RESPONSIBLE TO REPLACE IN KIND SOD, TREES, WALKS AND DRIVEWAY APRONS, ETC., OR MAKE PROPER ALLOWANCES WITH THE HOMEOWNERS. THE CONTRACTOR IS RESPONSIBLE FOR VIDEOTAPING ALL RIGHT-OF-WAY AREAS AFFECTED BY THE PROJECT PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.

IN ORDER THAT ALL UNNECESSARY DELAY TO THE TRAVELING PUBLIC MAY BE AVOIDED, THE CONTRACTOR SHALL PROVIDE AND STATION A COMPETENT FLAGPERSON WHOSE SOLE DUTY SHALL CONSIST OF DIRECTING THE MOVEMENT OF PUBLIC TRAFFIC THROUGH OR AROUND THE WORK.

EMBANKMENT, GRADING, AND EROSION CONTROL

GENERAL
PREMIUM BACKFILL AROUND STRUCTURES, ALL AREAS DISTURBED BY EXCAVATION. STABILIZE ALL AREAS OF DISTURBANCE.

EMBANKMENT COMPACTION
ALL COMPACTION, SUBGRADE COMPACTION, AND CONCRETE REPORTS SHALL BE FURNISHED TO THE ENGINEER AND THE CITY.

CONTROL SOIL COMPACTION DURING EMBANKMENT CONSTRUCTION TO PROVIDE THE MINIMUM PERCENTAGE OF DENSITY SPECIFIED FOR EACH AREA AS DETERMINED FOR A STANDARD PROCTOR TEST ACCORDING TO ASTM D 698. ANY AND ALL FILL SHOWN IS DEFINED AS EMBANKMENT.

PROVIDE NOT LESS THAN ONE HUNDRED PERCENT (100%) STANDARD PROCTOR DENSITY OF SUITABLE SOIL MATERIAL COMPACTED IN A MAXIMUM 8" LIFT WITHIN TWO PERCENT (2%) OF THE OPTIMUM MOISTURE CONTENT FOR THE ACTUAL DENSITY OF EACH LAYER OF SOIL MATERIAL IN PLACE. COMPACTION TESTING TO BE PERFORMED BY AN APPROVED SOIL TESTING LABORATORY IN ALL FILL AREAS AT 8" LIFT INCREMENTS. SOIL TESTING TO BE PAID FOR BY THE DEVELOPER.

EROSION CONTROL
THE DEVELOPER IS REQUIRED DURING THE CONSTRUCTION OF THIS PROJECT TO PROVIDE EROSION CONTROL MEASURES AS OUTLINED ON THE SEDIMENT CONTROL PLAN, TO PROTECT ALL AREAS AFFECTED BY THIS WORK. THESE SHALL INCLUDE ALL ITEMS INDICATED AND OTHER MEASURES IN ACCORDANCE WITH OHIO EPA'S NPDES PERMIT (OHC000002), THE CURRENT EDITION OF OHIO'S RAINWATER AND LAND DEVELOPMENT MANUAL AND THE LATEST EDITION OF THE CODIFIED ORDINANCES OF NORTH ROYALTON. SPECIAL CARE SHALL BE GIVEN TO ALL ACCESS ROADS ONTO THE CONSTRUCTION SITE.

THE DEVELOPER IS RESPONSIBLE FOR ALL MAINTENANCE OF THE STORM WATER MANAGEMENT FACILITY (DETENTION BASIN).

CONTRACTOR SHALL FOLLOW THE "CONSTRUCTION SCHEDULE" FOR SEDIMENT CONTROL AS OUTLINED ON SHEET SW4 OF THESE PLANS, SWPPP NOTES AND DETAILS SHEET.

DUST CONTROL
THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY SUCH AS CALCIUM CHLORIDE, WATER OR MOTORIZED DUST FREE STREET SWEEPING DEVICE, AS DIRECTED BY THE ENGINEER, TO MAINTAIN ALL ROADWAYS BEING USED FOR ACCESS TO THE CONSTRUCTION SITE. PAYMENT FOR ALL DUST CONTROL MEASURES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER VARIOUS ITEMS.

WATERLINE NOTES

CENTERLINE OF HYDRANT NOZZLES TO BE BETWEEN 18" AND 24" ABOVE CENTERLINE OF THE STREET.

AFTER FINAL GRADING, ALL HYDRANTS SHALL BE CLEANED AND PAINTED WITH TWO (2) COATS EACH OF THE FOLLOWING SHERWIN WILLIAMS PRODUCTS:
PRIMER: KEMBOND HS HIGH SOLIDS ALKID (UNIVERSAL METAL PRIMER) "OFF-WHITE" COLOR. PRODUCT #B50WZ0004
PAINT: INDUSTRIAL ENAMEL HS "SAFETY YELLOW" COLOR. PRODUCT #B54YZ0437

ALL INSTALLATION AND PRESSURE TESTING OF WATER MAIN SHALL MEET AWWA C-605 REQUIREMENTS FOR PVC PIPE AND AWWA C-600 FOR DUCTILE IRON.

ANY HYDRANTS WITH WEEPHOLES WITH LESS THAN 10' OF SEPARATION FROM SEWERS MUST BE MOVED OR EXTENDED TO MEET THE SEPARATION REQUIREMENT.

STORM AND SANITARY SEWER NOTES

ALL MANHOLES TO BE CONSTRUCTED AND SEWERS LAID PER THESE IMPROVEMENT PLANS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE CODIFIED ORDINANCE OF NORTH ROYALTON, OHIO.

ALL LATERAL CONNECTIONS, BOTH STORM AND SANITARY, TO BE 6" IN DIAMETER, CARRIED TO THE UTILITY EASEMENT LIMITS AT A MINIMUM SLOPE OF 1% AND A MINIMUM DEPTH OF 7 FEET BELOW THE ESTABLISHED CURB GRADE.

ALL RESIDENTIAL SERVICE CONNECTIONS SHALL BE A MINIMUM OF FIVE (5) FEET APART, OUT TO OUT. SANITARY LATERAL SERVICE CONNECTIONS AND WATER SERVICE CONNECTIONS SHALL BE INSTALLED AT LEAST 10 FEET APART.

AT ALL MAINLINE SEWER AND WATER CROSSINGS WITH LESS THAN 18" CLEARANCE ENCASE THE LOWER PIPE AND MONOLITHICALLY CRADLE THE UPPER PIPE IN 2500 PSI CONCRETE FOR THE WIDTH OF THE TRENCH PLUS TWO (2) FEET.

ALL EXISTING HOMEOWNERS ALONG A TRUNK LINE INSTALLATION (SEWER/WATER) SHALL BE GIVEN 2-DAY WRITTEN NOTICE BY MAIL BEFORE WORK BEGINS.

WHERE UTILITIES ARE UNDER OR NEAR ANY PAVEMENT OR WALKS, TRENCHES CAN BE BACKFILLED AND COMPACTED WITH PREMIUM BACKFILL (NO. 57 GRAVEL). SEE THE "TYPICAL TRENCH SECTIONS" DETAIL, SHEET 15 OF THESE PLANS.

STORM SEWERS
ALL STORM SEWER CONNECTIONS JOINTS TO BE RUBBER, NEOPRENE OR PLASTIC TYPE PREMIUM JOINTS PER A.S.T.M. C-425.

ALL REINFORCED CONCRETE PIPE TO BE USED BENEATH PAVEMENT AND TO BE A.S.T.M. C-76 CLASS IV (12"-15" DIA.) AND CLASS III (18"-36" DIA.), EXCEPT AS NOTED.

ALL STORM SEWER MANHOLE FRAMES SHALL BE BOLTED ONTO THE MANHOLE.

COLOR PHOTOGRAPHY OR VIDEO INSPECTION AND TESTING OF STORM SEWERS
ALL INSPECTION AND TESTING SHALL BE DONE BY AN EXPERIENCED AND QUALIFIED FIRM ENGAGED IN THIS TYPE OF WORK, AS APPROVED BY THE CITY OF NORTH ROYALTON. WRITTEN REPORTS FOR ALL INSPECTION AND TESTING SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL. IF THE INSTALLATION FAILS TO MEET THE REQUIREMENTS OF THE TESTS AND INSPECTIONS, THE CONTRACTOR SHALL REPAIR OR REPLACE ALL DEFECTS AND RE-TEST THE INSTALLATION.

FOR 48" AND LARGER PIPE, VISUAL INSPECTION MAY BE PERFORMED IN LIEU OF COLOR PHOTOGRAPHY OR VIDEO INSPECTION.

COLOR PHOTOGRAPHY OR VIDEO INSPECTION AND TESTING OF SANITARY SEWERS
ALL INSPECTIONS AND TESTING SHALL BE DONE BY AN EXPERIENCED AND QUALIFIED FIRM IN THIS TYPE OF WORK, AS APPROVED BY THE CITY OF NORTH ROYALTON. VIDEOS AND WRITTEN REPORTS FOR ALL INSPECTION AND TESTING SHALL BE SUBMITTED TO THE OWNER AND THE CITY OF NORTH ROYALTON FOR APPROVAL. ALL SANITARY SEWERS MUST BE FLUSHED AND PASS THE LATEST PROPOSED LOW PRESSURE AIR TEST REQUIREMENTS AND DEFLECTIONS TEST REQUIREMENTS OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY AND THE CITY OF NORTH ROYALTON. THE MAXIMUM DEFLECTION ALLOWED IS 5%. THE MAXIMUM LEAKAGE ALLOWED IS 100 GALLONS PER INCH OF PIPE DIAMETER, PER MILE OF SEWER PER DAY. ALL SANITARY SEWERS MUST ALSO HAVE A COLOR PHOTOGRAPHY OR VIDEO INSPECTION. ALL FINAL TESTING AND INSPECTIONS SHALL BE PERFORMED AFTER THE COMPLETION OF PAVEMENT CONSTRUCTION AND SEEDING OF DISTURBED AREAS, BUT PRIOR TO THE ISSUANCE OF BUILDING PERMITS. IF THE INSTALLATION FAILS TO MEET THE REQUIREMENTS OF THESE TESTS AND INSPECTIONS THE CONTRACTOR SHALL REPAIR DEFECTS AND RETEST INSTALLATION.

DEFLECTION TEST
A. DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL PIPE SYSTEM.
B. NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, REPLACEMENT OR CORRECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH REQUIREMENTS IN THE APPROVED SPECIFICATIONS.
C. THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NO LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX TO WHICH THE PIPE IS MANUFACTURED. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

HYDROSTATIC TEST
THE LEAKAGE EXFILTRATION OR INFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER, PER MILE OF SEWER PER DAY (0.01M3/MM OF PIPE DIA./KM/DAY) FOR ANY SECTION OF THE SYSTEM. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET (600 MM)

AIR TEST
THE AIR TEST SHALL, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE. ASTM C-924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS TEST PROCEDURES APPROVED BY THE REGULATORY AGENCY.

MANHOLE TEST
ALL MANHOLES TO BE VACUUM TESTED AS PER ASTM C-1244.
ALL TESTING SHALL BE WITNESSED BY A CITY OF NORTH ROYALTON SANITARY OFFICIAL.
ALL SANITARY SEWER MANHOLES SHALL FURNISHED WITH AN INTERNAL MANHOLE CHIMNEY SEAL.
ONLY CONCRETE ADJUSTING RINGS SHALL BE ALLOWED.
ALL SANITARY MANHOLES SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH SECTION 1040.28 OF THE CODIFIED ORDINANCES OF THE CITY OF NORTH ROYALTON.

GENERAL NOTES - OHIO EPA

1. A TEN (10) FEET MINIMUM SEPARATION (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED BETWEEN THE WATER LINE AND THE SANITARY LINE.
2. AN 18-INCH MINIMUM VERTICAL CLEARANCE (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED BETWEEN THE WATER LINE AND THE SANITARY LINE AT ALL CROSSINGS.
3. A TEN (10) FEET MINIMUM SEPARATION (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED BETWEEN THE WATER LINE AND THE STORM SEWER.
4. A 18-INCH MINIMUM VERTICAL CLEARANCE (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED THE WATER LINE AND THE STORM SEWER AT ALL CROSSINGS.
5. BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.
6. THE PROPOSED IMPROVEMENTS WILL PROVIDE A MINIMUM 35 PSI PRESSURE AT THE CURB STOP DURING NORMAL OPERATING CONDITIONS.
7. THE SYSTEM SHALL BE DESIGNED TO MAINTAIN A MINIMUM OF 20 PSI AT GROUND LEVEL AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL FLOW CONDITIONS.
8. ALL WATER MAIN SHALL BE INSTALLED AND PRESSURE TESTED PER AWWA C600
9. ALL WATER MAIN SHALL BE DISINFECTED PER AWWA c651
10. SANITARY SEWER AIR TESTING SHALL CONFORM WITH ASTM C-1244.
11. NO SANITARY PIPE SHALL EXCEED A DEFLECTION OF 5% AS PER GLUMRB 33.85.
12. FLEXIBLE GASKETS ON SEWER LINE CONNECTIONS ARE TO CONFORM WITH ASTM C-923
13. SANITARY MANHOLES ARE TO CONFORM WITH MATERIAL SPECIFICATION ASTM C-478
14. SANITARY MANHOLE JOINTS ARE TO CONFORM WITH SPECIFICATION ASTM C-443
15. SANITARY PIPE BEDDING CLASSIFICATION IS TO CONFORM WITH SPECIFICATION ASTM D-2321 (I,II,III)
16. SANITARY MANHOLES ARE TO BE AIR TESTED ACCORDING TO ASTM C-1244-93 TO VERIFY WATER TIGHTNESS AND PROPER CONSTRUCTION PER PLAN DETAILS
17. SANITARY SEWERS MUST PASS A LEAKAGE TEST WHICH SHALL BE A LOW PRESSURE AIR TEST IN ACCORDANCE WITH THE 'TEN STATE STANDARDS' SECTION 33.95 PER ASTM F-1417 FOR PLASTIC PIPE.

PROJECT UTILITY CONTACTS:

OHIO UTILITIES PROTECTION SERVICE (OUPS)
(800) 362-2764

OHIO OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE (OGPUPS)
(800) 925-0988

CITY OF NORTH ROYALTON SERVICE DEPT. (STORM SEWERS)
11545 ROYALTON RD
NORTH ROYALTON, OH 44133
NICK CINQUEPALMI
(440) 582-3002

CITY OF NORTH ROYALTON WASTEWATER (SANITARY SEWERS)
11675 ROYALTON ROAD
NORTH ROYALTON, OH 44133
MARK SMITH
(440) 237-5010

CITY OF CLEVELAND, DIVISION OF WATER
1201 LAKESIDE AVENUE, 6TH FLOOR
CLEVELAND, OHIO 44114
FRED ROBERTS
(216) 664-2444 X 75590

SPECTRUM CABLE (TWC)
8179 DOW CIRCLE
STRONGSVILLE, OH 44136
GARY NEWMANN
(216) 854-0717

WIDE OPEN WEST OHIO, LLC
105 BLAZE INDUSTRIAL PARKWAY
BEREA, OH 44017
BOB HAMMOND
(440) 606-6262

COLUMBIA GAS OF OHIO
7080 FRY ROAD
MIDDLEBURG HEIGHTS, OH 44130
DAN SUREN
(440) 891-2428

DOMINION EAST OHIO
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OH 44333
BRYAN DAYTON
(330) 664-2409

THE ILLUMINATING COMPANY (FIRST ENERGY)
6896 MILLER ROAD
BRECKSVILLE, OHIO 44141
TED RADER
(440) 546-8738

AT&T
13630 LORAIN AVENUE
CLEVELAND, OH 44111
JAMES JANIS
(330) 476-6142

VERIZON
120 RAVINE STREET
AKRON, OH 44303
AL GUEST
(330) 253-8267

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423
DAVEY Resource Group

HUNTINGTON PARK PHASE 4
GENERAL NOTES

PROJECT NUMBER	1966
DATE	2021-09-02

BENCHMARKS

BENCHMARK #1: FIRE HYDRANT NORTH FLANGE BOLT
STA. 20+38.60, 17.49R ELEV= 1234.48'

BENCHMARK #2: EXISTING SANITARY MANHOLE
STA. 21+88.19, 19.63L ELEV= 1231.56'

NOTES

TREE CLEARING AREA

EXISTING CONDITIONS SITE SURVEY WAS PREPARED BY: DAVEY RESOURCE GROUP

DATE OF EXISTING CONDITIONS SURVEY: 05/25/2021

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

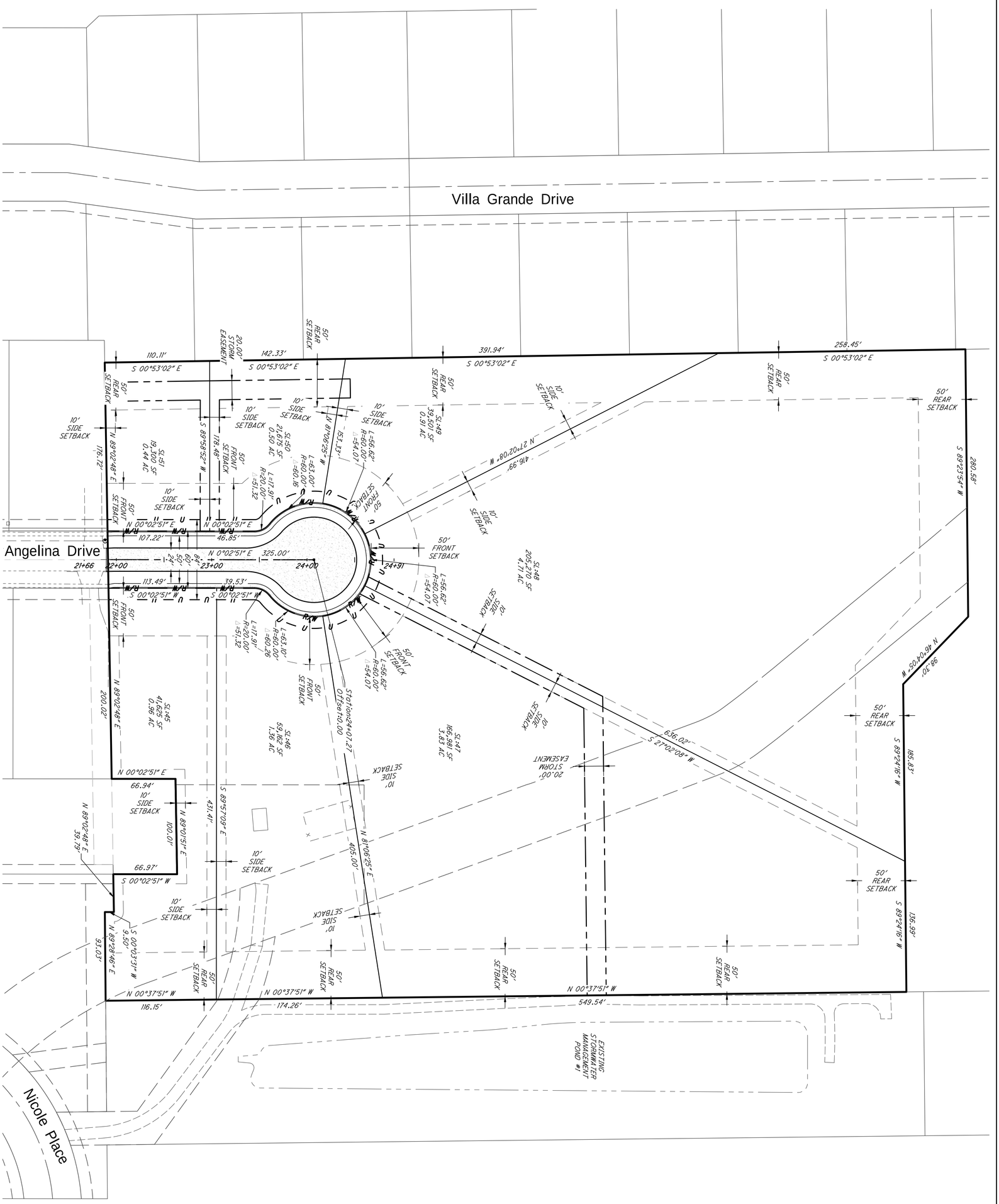
SCALE (IN FEET)
1 inch = 50 ft.

N

HUNTINGTON PARK PHASE 4
EXISTING CONDITIONS

PROJECT NUMBER	1966
DATE	2021-09-02

3 / 24



4 / 24	2021-09-02	1966	PROJECT NUMBER	HUNTINGTON PARK PHASE 4	
				SITE GEOMETRIC PLAN	

N

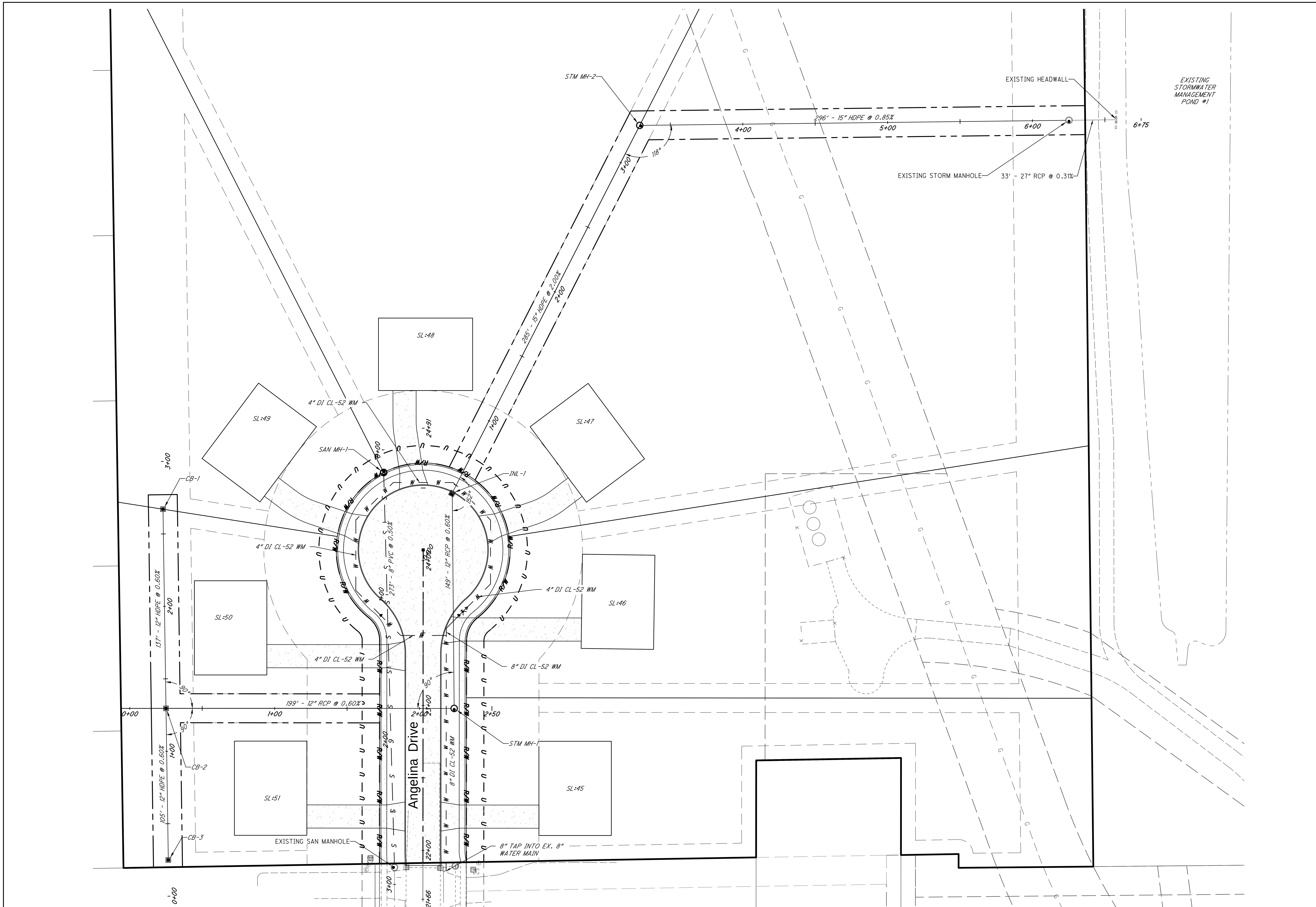
0 25 50 100

SCALE (IN FEET)
1 inch = 50 ft.

DAVEY Resource Group

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

File: f:\tgc eng\projects\1966 huntington park con\dwg\1966 layouts.dwg Saved: 9/2/2021 3:08 PM (mc0177) Plotted: 9/2/2021 3:11 PM (mc0177) PlotStyler (TGC 2019.ctb) Scaler (1:1) Page Setup: (34 BY 22)


STM MH-2
EXISTING HEADWALL
EXISTING STORMWATER MANAGEMENT POND #1
296' - 15" HDPE @ 0.85%
4+00
5+00
6+00
6+75
118°
3+00
EXISTING STORM MANHOLE
33' - 27" RCP @ 0.31%
285' - 15" HDPE @ 2.00%
2+00
1+00
SL:48
SL:49
SL:47
SL:46
SL:50
SL:51
SL:45
4" DI CL-52 WM
SAN MH-1
INL-1
CB-1
CB-2
CB-3
24+91
273' - 8" PVC @ 0.50%
149' - 12" RCP @ 0.60%
137' - 12" HDPE @ 0.60%
105' - 12" HDPE @ 0.60%
199' - 12" RCP @ 0.60%
8" DI CL-52 WM
STM MH-1
0+00
2+50
Angelina Drive
EXISTING SAN MANHOLE
8" TAP INTO EX. 8" WATER MAIN
22+00
21+66
90°

DAVEY Resource Group

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

SCALE (IN FEET) 1 inch = 30 ft.

0 15 30 60

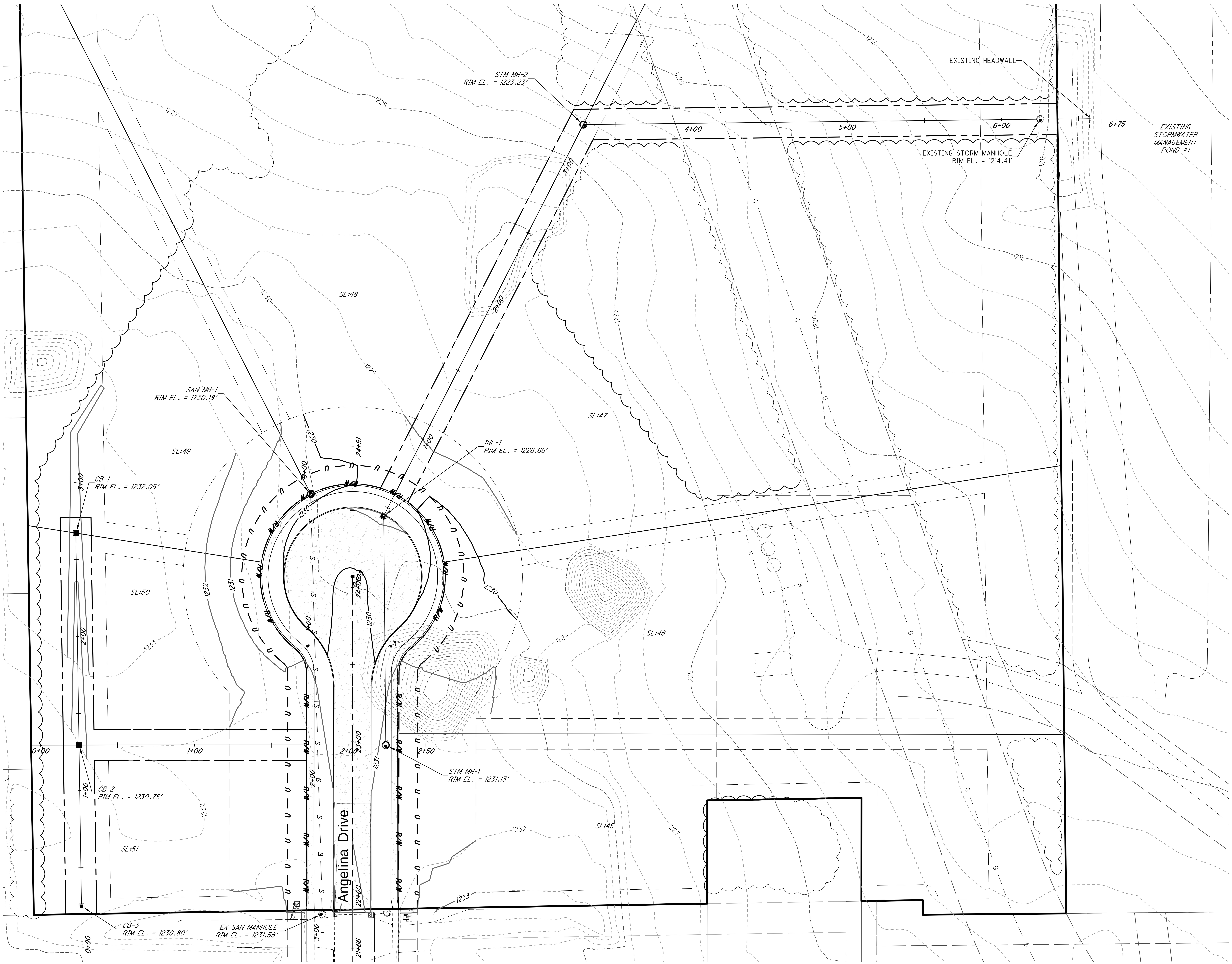
N

HUNTINGTON PARK PHASE 4

UTILITY PLAN

PROJECT NUMBER: 1966

DATE: 2021-09-02


STM MH-2
RIM EL. = 1223.23'
EXISTING HEADWALL
6+75
EXISTING STORMWATER MANAGEMENT POND #1
4+00
5+00
6+00
EXISTING STORM MANHOLE
RIM EL. = 1214.41'
3+00
2+00
1+00
SL:48
SL:47
SL:49
SL:50
SL:46
SL:45
SL:51
SAN MH-1
RIM EL. = 1230.18'
INL-1
RIM EL. = 1228.65'
24+91
CB-1
RIM EL. = 1232.05'
CB-2
RIM EL. = 1230.75'
CB-3
RIM EL. = 1230.80'
STM MH-1
RIM EL. = 1231.13'
EX SAN MANHOLE
RIM EL. = 1231.56'
Angelina Drive
0+00
1+00
2+00
2+50
23+00
22+00
21+66
24+00
1225
1227
1229
1230
1231
1232
1233
1220
1215

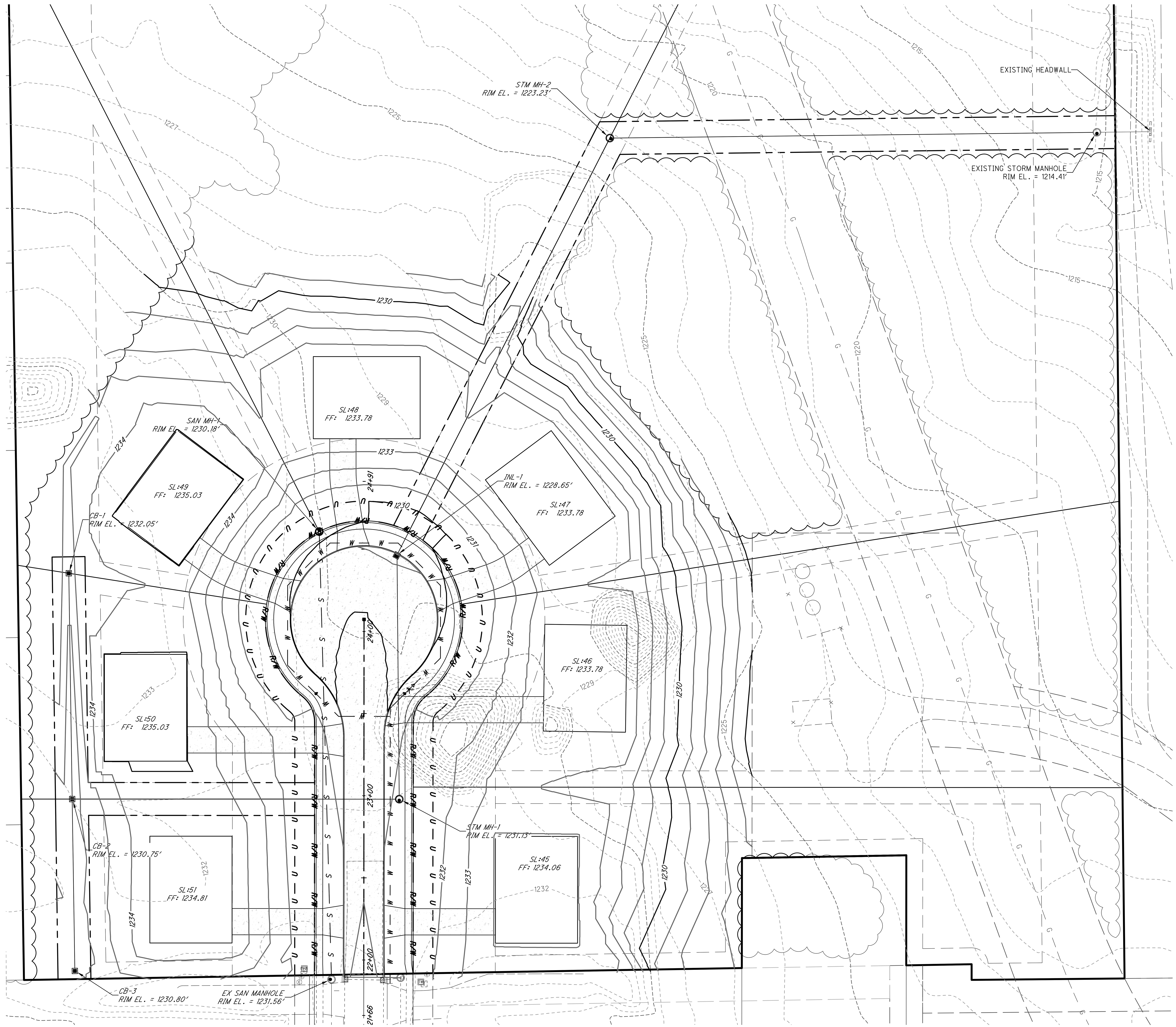
Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

SCALE (IN FEET)
1 inch = 60 ft.
0 30 60 120

N

HUNTINGTON PARK PHASE 4
MASS GRADING PLAN

PROJECT NUMBER	1966
DATE	2021-09-02



NOTES

1. DRIVE APRONS AND DRIVEWAYS ARE SHOWN FOR CONCEPT AND WILL BE INSTALLED BY THE HOME BUILDER(S) AT A LATER DATE. THE LOCATIONS OF THE PROPOSED DRIVEWAYS (WHETHER ON THE RIGHT OR LEFT SIDE) ARE CONSIDERED FINAL AND THE HOME BUILDER(S) SHALL PLAN ACCORDINGLY.

2. FINAL GRADE ELEVATIONS ARE CONCEPTUAL IN NATURE AND MAY NEED TO BE ALTERED BY THE HOME BUILDER.

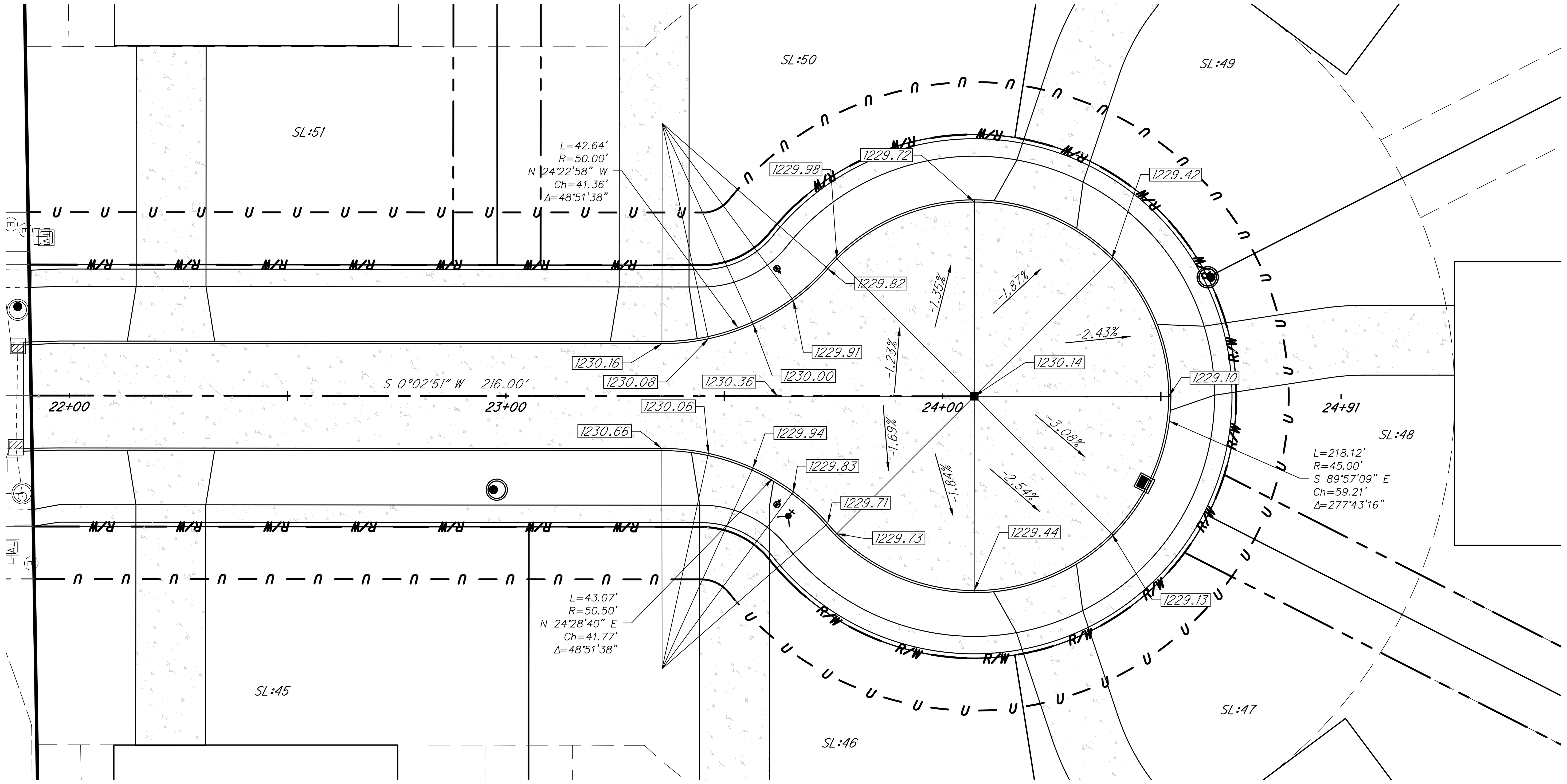
DAVEY Resource Group
Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

SCALE (IN FEET)
1 inch = 30 ft.
0 15 30 60

N

HUNTINGTON PARK PHASE 4
FINAL GRADING PLAN

PROJECT NUMBER	1966
DATE	2021-09-02



DETAIL: ANGELINA DRIVE CUL-DE-SAC

SCALE: 1"=20'

ELEVATIONS SHOWN ARE TOP OF PAVEMENT / BOTTOM OF CURB

STORM LATERAL CONNECTION SCHEDULE

SUBLOT #	ALIGNMENT	STATION AT MAIN	INVERT LATERAL ELEVATION AT GUE	LATERAL LENGTH TO GUE
45	ANGELINA DRIVE	23+00	1226.38	20'
46	ANGELINA DRIVE	23+80	1226.17	47'
47	STM-3	1+31	1223.95	38'
48	STM-3	1+36	1223.78	31'
49	STM-2	2+67	1225.98	71'
50	STM-1	0+70	1227.36	24'
51	STM-1	0+97	1227.19	23'

WATER LATERAL CONNECTION SCHEDULE

SUBLOT #	ALIGNMENT	STATION AT MAIN	LATERAL LENGTH TO GUE
45	ANGELINA DRIVE	40+74	58'
46	ANGELINA DRIVE	36+04	58'
47	ANGELINA DRIVE	41+22	58'
48	ANGELINA DRIVE	37+94	58'
49	ANGELINA DRIVE	40+07	58'
50	ANGELINA DRIVE	38+95	58'
51	ANGELINA DRIVE	37+02	58'

6" SANITARY LATERAL CONNECTION SCHEDULE

SUBLOT #	ALIGNMENT	STATION AT MAIN	INVERT LATERAL ELEVATION AT GUE	LATERAL LENGTH TO GUE
45	ANGELINA DRIVE	22+50	1222.60	64'
46	ANGELINA DRIVE	23+85	1223.64	100'
47	ANGELINA DRIVE	24+03	1223.68	95'
48	ANGELINA DRIVE	24+61	1223.37	37'
49	ANGELINA DRIVE	24+36	1223.22	33'
50	ANGELINA DRIVE	23+63	1222.85	32'
51	ANGELINA DRIVE	22+47	1222.16	21'

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423
DAVEY Resource Group

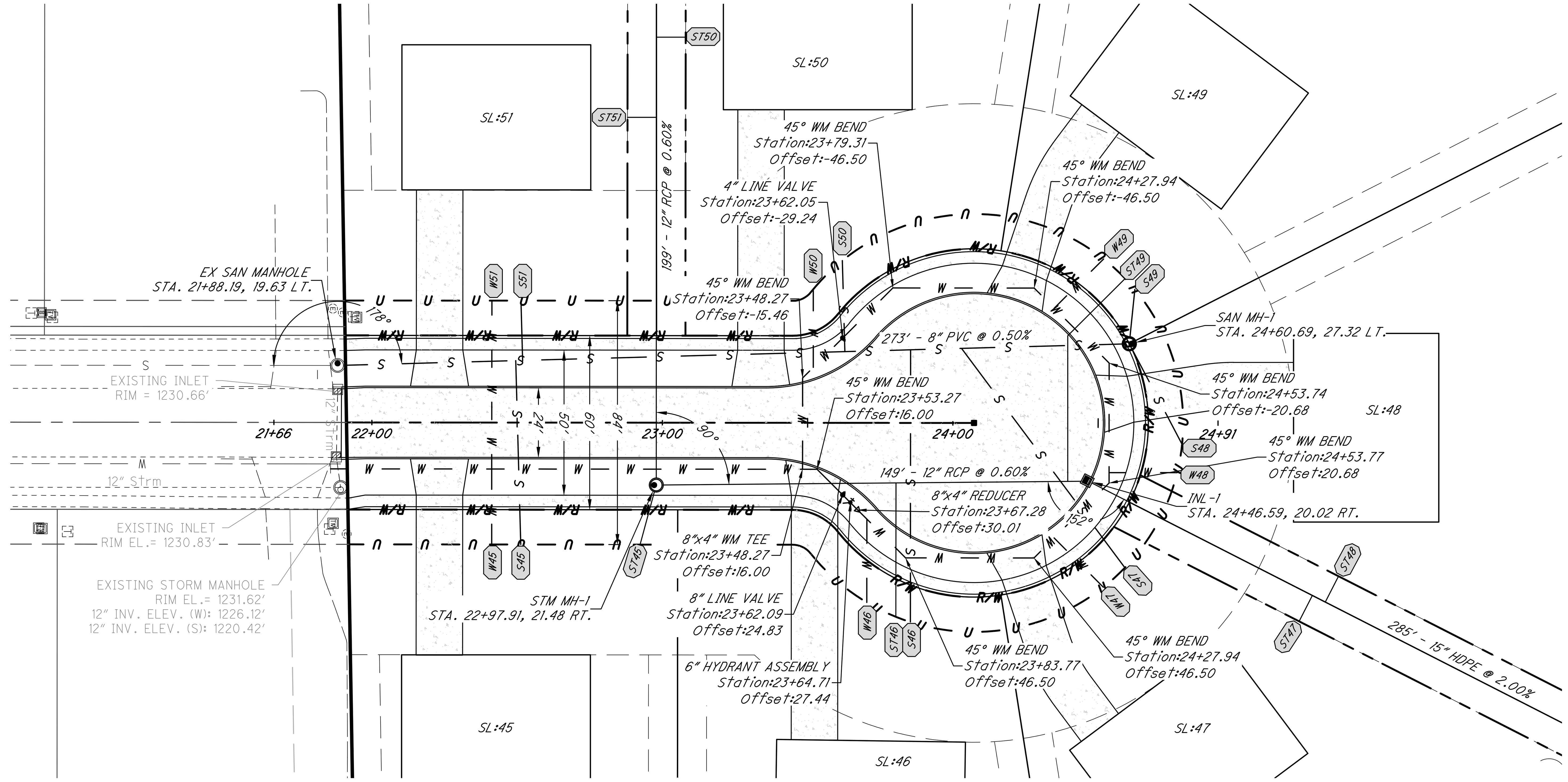
SCALE (IN FEET) 1 inch = 20 ft.

HUNTINGTON PARK PHASE 4

INTERSECTION DETAIL

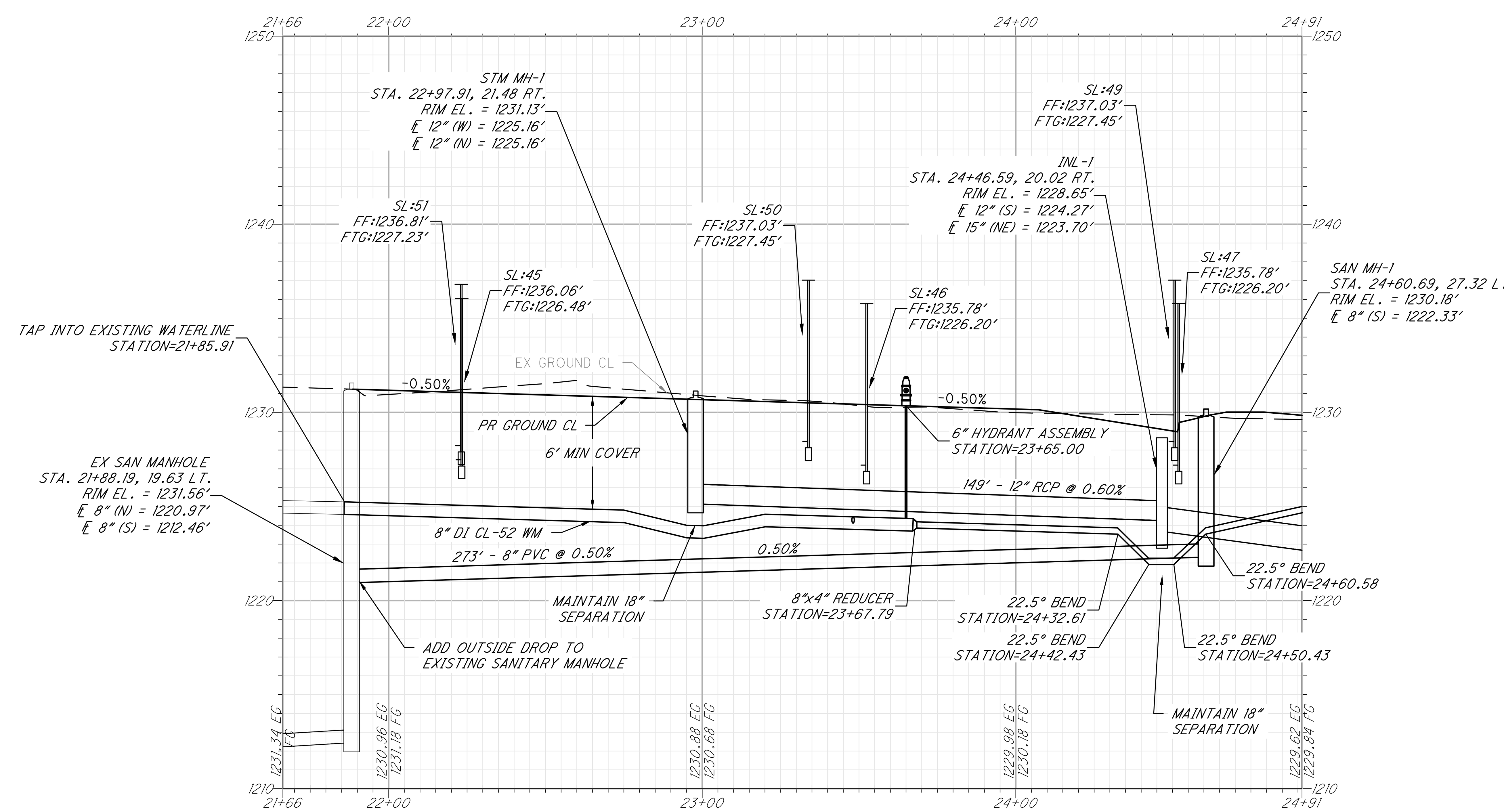
PROJECT NUMBER 1966

DATE 2021-09-02



PLAN: ANGELINA DRIVE

SCALE: 1"=30'



PROFILE: ANGELINA DRIVE

SCALE: 1"=30' H, 1"=5' V

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

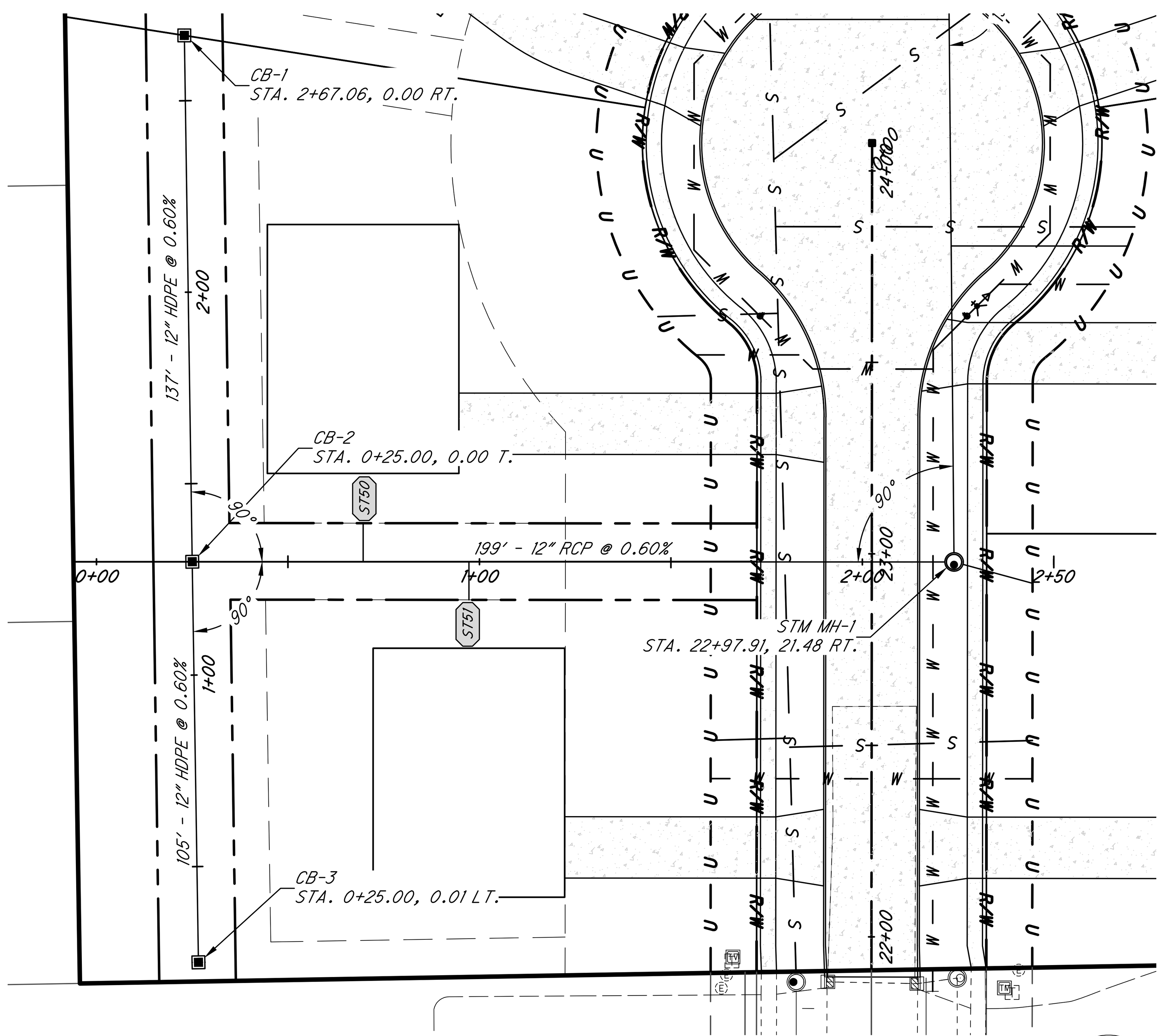
SCALE (IN FEET) 1 inch = 30 ft.

HUNTINGTON PARK PHASE 4

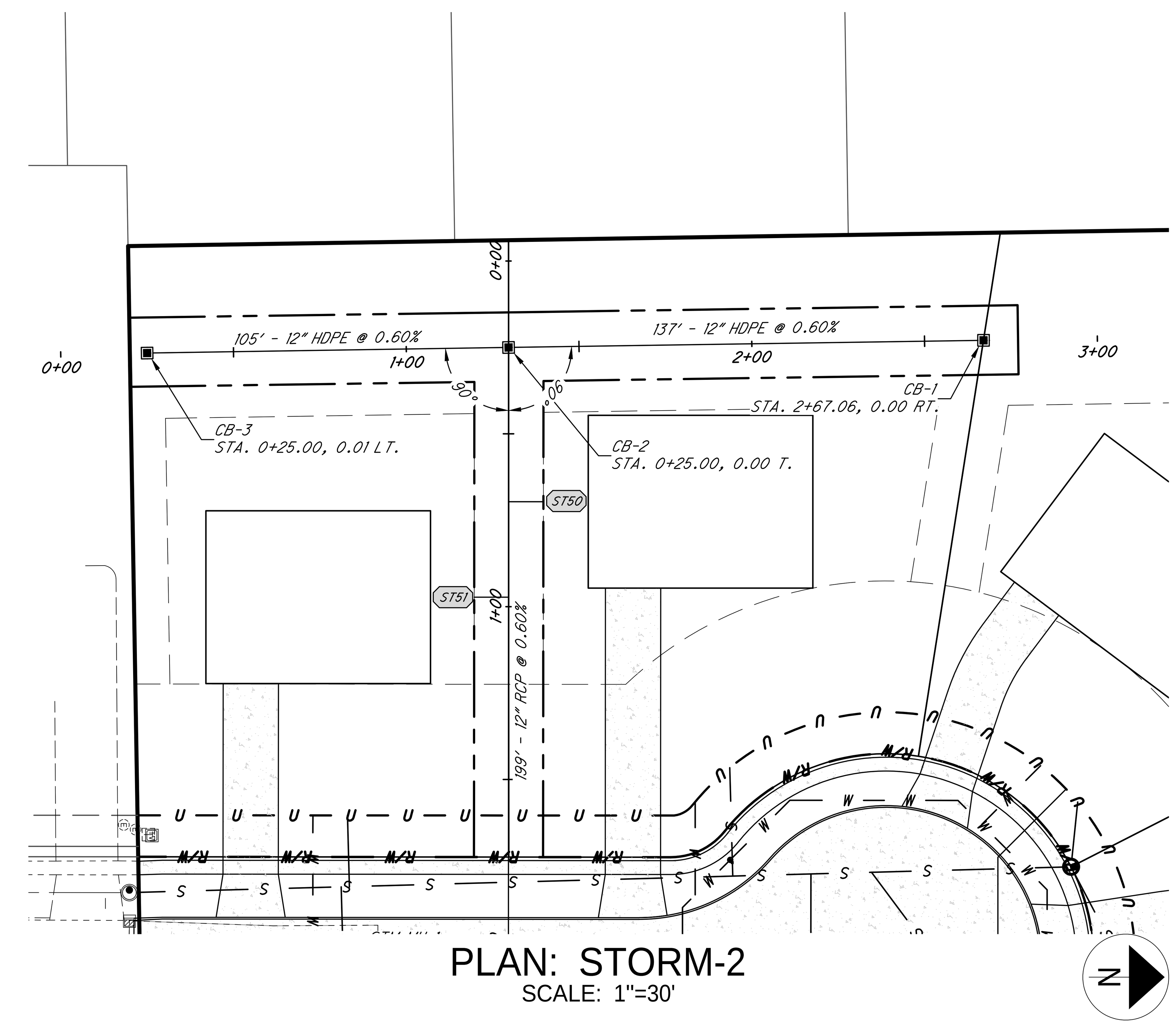
PLAN AND PROFILE ANGELINA DRIVE

PROJECT NUMBER: 1966

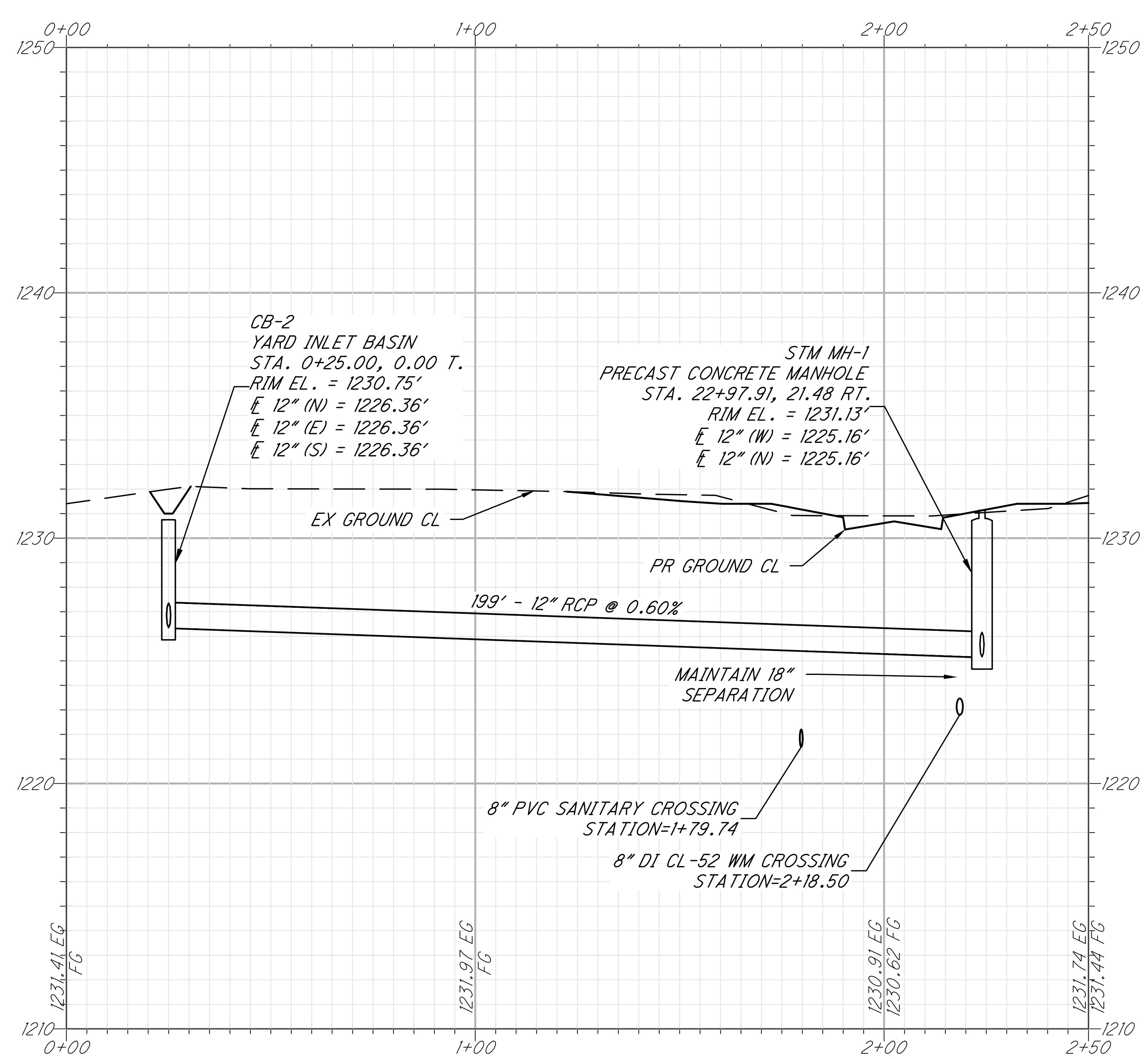
DATE: 2021-09-02



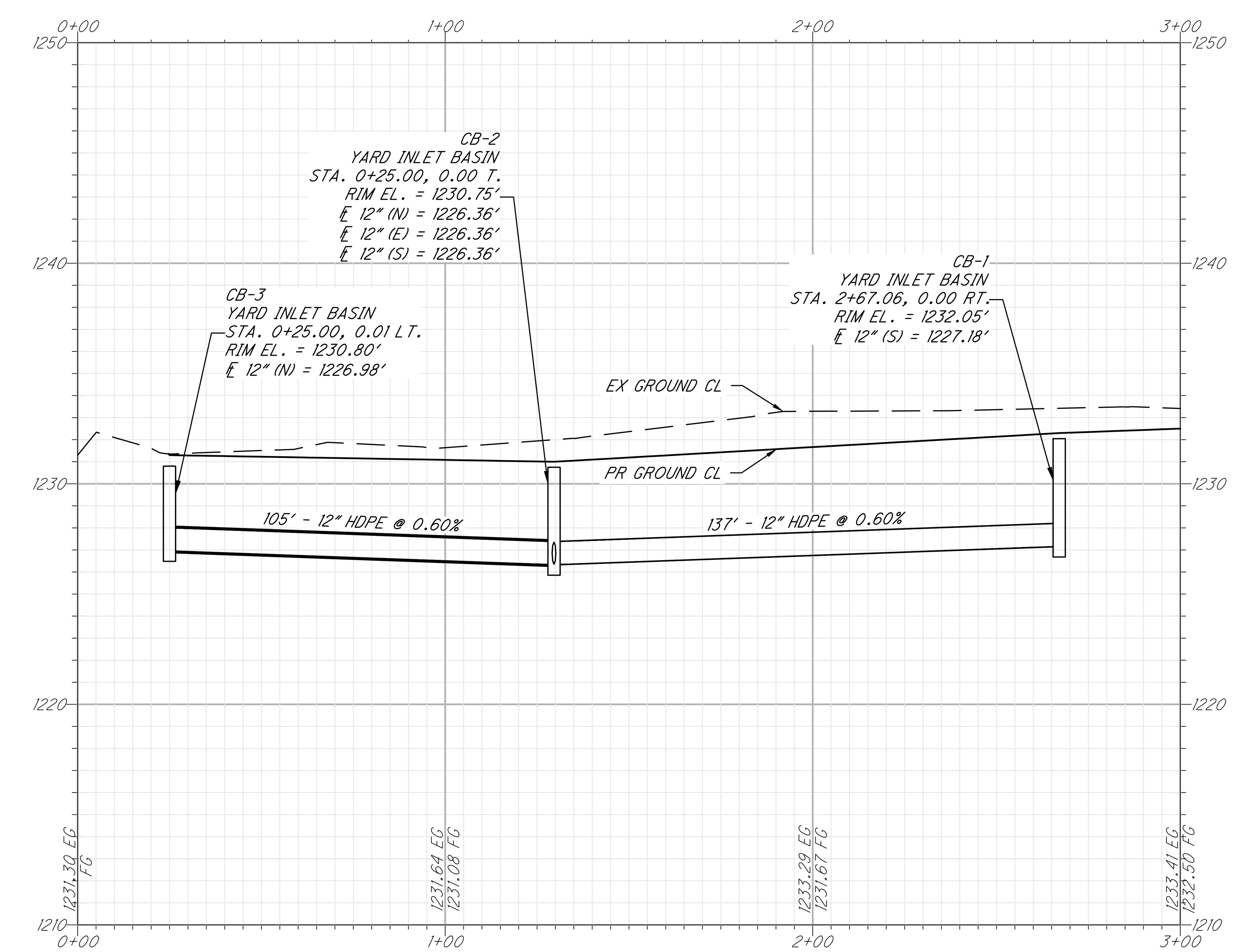
PLAN: STORM-1
SCALE: 1"=30'



PLAN: STORM-2
SCALE: 1"=30'



PROFILE: STORM-1
SCALE: 1"=30' H, 1"=5' V



PROFILE: STORM-2
SCALE: 1"=30' H, 1"=5' V

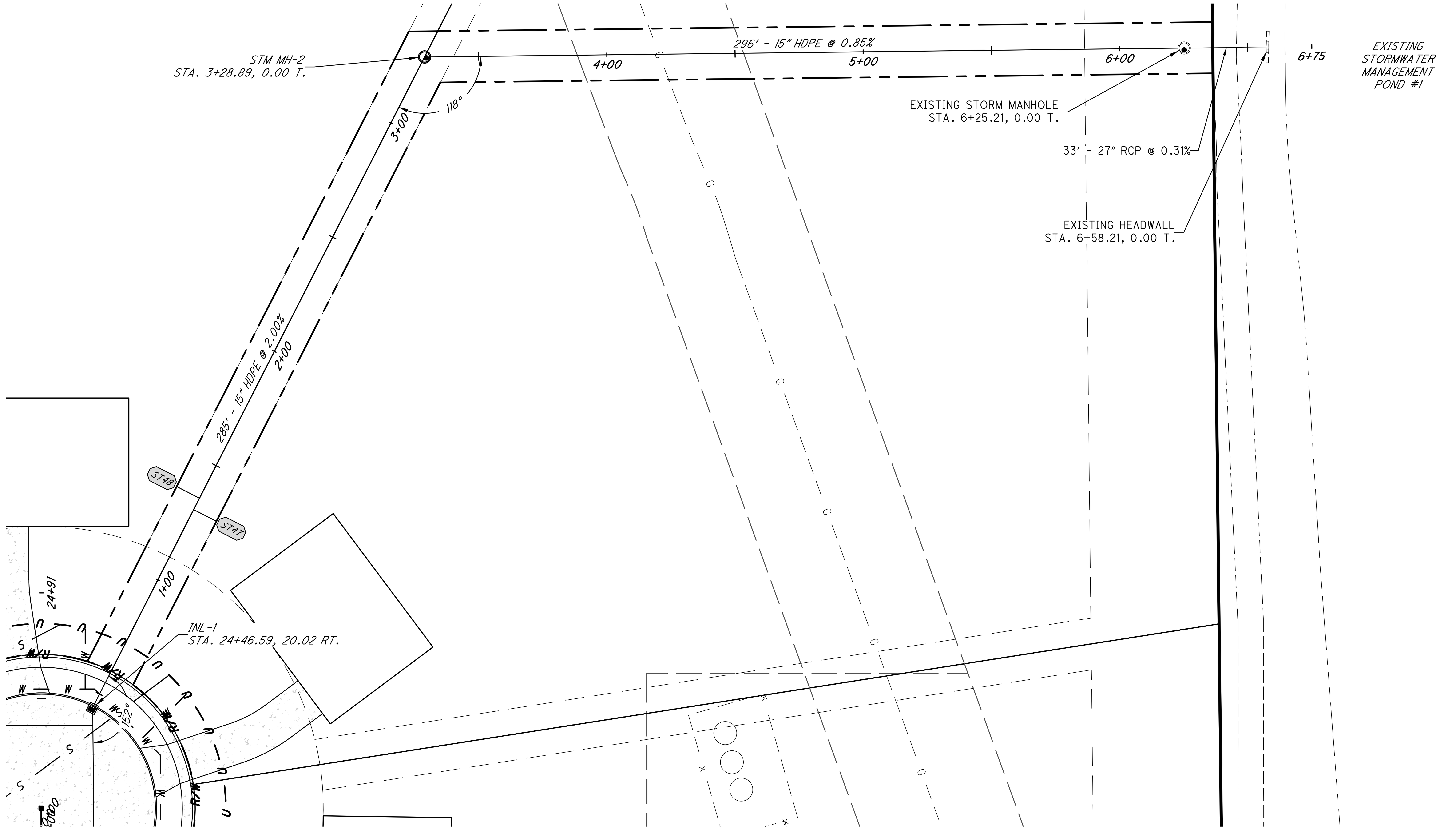
Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

SCALE (IN FEET) 1 inch = 30 ft.

HUNTINGTON PARK PHASE 4
STORM SEWER PLAN & PROFILES

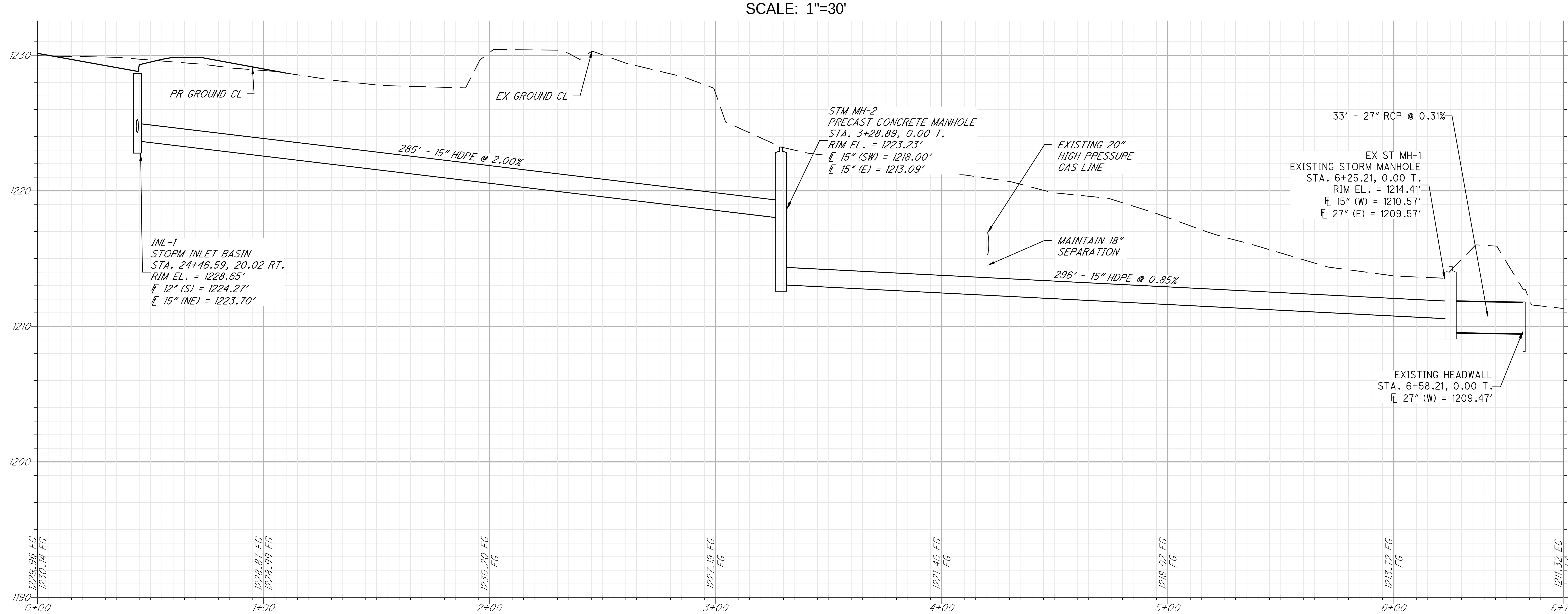
PROJECT NUMBER: 1966

DATE: 2021-09-02



PLAN: STORM-3

SCALE: 1"=30'



PROFILE: STORM-3

SCALE: 1"=30' H, 1"=5' V

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423
DAVEY Resource Group

SCALE (IN FEET)
1 inch = 30 ft.

N

HUNTINGTON PARK PHASE 4

STORM SEWER PLAN & PROFILES

PROJECT NUMBER

1966

DATE

2021-09-02

CLEVELAND DIVISION OF WATER NOTES FOR NEW PVC WATER MAIN INSTALLATION

GENERAL:

1. ALL WATER WORK REQUIRED, WHETHER SHOWN ON THE PLANS OR AS DIRECTED BY THE CLEVELAND DIVISION OF WATER, SHALL BE AT THE EXPENSE OF THE PROJECT.

2. THE INFORMATION SHOWN ON THE CLEVELAND DIVISION OF WATER'S SUMMARY OF WORK/CHARGE LETTER AND STRIP MAPS ARE TAKEN FROM EXISTING AVAILABLE RECORDS, AND THEIR ACCURACY IS NOT GUARANTEED.

3. CALL THE INSPECTION AND ENFORCEMENT UNIT AT 216-664-2342 TO SCHEDULE A PRECONSTRUCTION MEETING. THE OPERATION OF ANY VALVE OR ALTERATION OF ANY PART OF THE WATER SYSTEM BY CONTRACTORS OR THEIR EMPLOYEES IS PROHIBITED WITHOUT THE SUPERVISION OF THE CLEVELAND DIVISION OF WATER INSPECTOR.

4. THE MUNICIPALITY SHALL REQUIRE THAT THE PROJECT'S PROFESSIONAL ENGINEER OBTAIN ACTUAL FIELD MEASUREMENTS OF THE MAIN DURING INSTALLATION AND SHALL FURNISH THE CWD INSPECTOR WITH RECORD PRINTS IN A FORM ACCEPTABLE TO THE DIVISION OF WATER. THE CLEVELAND DIVISION OF WATER WILL REQUIRE THE DELIVERY AND ACCEPTANCE OF TWO COPIES OF RECORD (AS BUILT) PRINTS BEFORE THE PRESSURE TEST AND CHLORINATION OF THE MAIN.

5. FOR THE PURPOSES OF CHLORINATION AND BACTERIOLOGICAL TESTING OF THE WATER MAINS THE CONTRACTOR SHALL PROVIDE AND INSTALL, AT EACH OF THE CHLORINATION PIT LOCATIONS SHOWN AND AT OTHER LOCATIONS DETERMINED BY THE DIVISION OF WATER, FLUSHING/SAMPLING TAPS OF SIZES TO BE DETERMINED BY THE DIVISION OF WATER. CHLORINATION PITS SHALL BE SIX (6) FOOT SQUARE MEETING OSHA STANDARDS.

6. A TWO YEAR WARRANTY, COMMENCING FROM THE DATE OF ACCEPTANCE OF THE FINAL CHLORINATION OF THE WATER MAIN INSTALLATION, SHALL BE PROVIDED BY THE BUILDER/DEVELOPER AND/OR CONTRACTOR FOR ALL WATER MAINS AND SERVICE CONNECTION WORK PERFORMED BY THE CONTRACTOR, INCLUDING RETAPS, SHOULD ANY LEAKS OCCUR AND REPAIRS BE REQUIRED DUE TO DEFECTIVE MATERIAL OR POOR WORKMANSHIP.

7. USE BACKFILL MATERIAL AS SPECIFIED AND COMPACT SUFFICIENTLY IN THOSE AREAS WHERE EXISTING MAINS AND WATER SERVICE CONNECTIONS ARE EXPOSED. (SEE DIVISION OF WATER STANDARD DETAIL PVC-001).

8. ALL MATERIALS, INCLUDING BUT NOT LIMITED TO WATER MAINS, FIRE HYDRANTS, VALVES, CONNECTION MATERIALS AND OTHER WATER APPURTENANCES, SHALL BE NEW AND UNUSED AND SHALL CONFORM TO THE MOST CURRENT DIVISION OF WATER SPECIFICATIONS. ALL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION OF WATER'S STANDARDS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER MAINS AND APPURTENANCES THEREOF WHEN CONNECTING THE NEW WATER MAIN FOR THE HYDROSTATIC TEST. ALL REPAIRS TO DAMAGED EXISTING FACILITIES SHALL BE MADE BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE DIVISION OF WATER. (REFER TO THE THE ALTERNATE TEST DETAIL PVC-002 AS NEEDED).

10. ALL HYDROSTATIC PRESSURE TESTING SHALL BE DONE BY THE CONTRACTOR IN THE PRESENCE OF THE DIVISION OF WATER'S INSPECTOR. THE HYDROSTATIC TEST PRESSURE SHALL BE 75 PSI ABOVE THE STATIC PRESSURE PREVAILING AT THE SITE, BUT IN NO CASE LESS THAN 150 PSI. THE PRESSURE TEST SHALL BE FOR A DURATION OF TWO (2) HOURS WITH THE PRESSURE BEING MAINTAINED WITHIN 5 PSI OF THE REQUIRED TEST PRESSURE. SHOULD THE PRESSURE TEST FAIL THE CONTRACTOR SHALL FIND AND CORRECT THE DEFICIENCY(IES) TO THE SATISFACTION OF THE DIVISION OF WATER AND REPEAT THE TWO (2) HOUR PRESSURE TEST.

WATER MAINS:

11A. ALL PIPE, UNLESS OTHERWISE CALLED FOR , SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE PIPE IN ACCORDANCE AWWA C-900-97 CLASS 200 OR C-909-98 200 PSI OR BETTER. JOINTS SHALL BE MADE UTILIZING A STAB TYPE, RUBBER GASKETED BELL & SPIGOT, SOLVENT CEMENT TYPE JOINTS WILL NOT BE PERMITTED. STANDARD PLASTIC TRACER TAPE IS TO BE BURIED 4'-0" AND LOCATED DIRECTLY ABOVE THE WATERMAIN.

11B. ALL FITTINGS, UNLESS OTHERWISE CALLED FOR, SHALL BE APPROVED DUCTILE IRON, CLASS 350, CEMENT LINED OR FUSION BONDED EPOXY COATED. ALL FITTINGS AND PIPE CONNECTED TO FITTINGS SHALL BE RESTRAINED USING A 'RETAINED' MECHANICAL JOINT CONFORMING TO THE MATERIAL AND PERFORMANCE REQUIREMENTS OF ANSI/AWWA C-110/A21.10 AND ANSI/AWWA C-111/A21.11, OR "COMPACT" FITTINGS IN ACCORDANCE WITH ANSI/AWWA C-153/A21.53. EXCEPT FOR ANCHOR TEES, REDUCERS OR OTHER SPECIAL CIRCUMSTANCES WHEN DIRECTED BY CLEVELAND DIVISION OF WATER, ALL FITTINGS ARE TO HAVE BELL ENDS.

11C. ALL BOLTS AND NUTS ON ALL 'RETAINED' MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88, CLASS 'C', METHOD 'B'.

11D. WHERE SHOWN ON THE PLANS, OR WHEN OTHERWISE CALLED FOR, DUCTILE IRON PIPE AND FITTINGS SHALL HAVE AN APPROVED 'TYPE I' OR 'TYPE II' BOLTLESS RESTRAINED PUSH-ON JOINTS TO THE LIMITS SHOWN ON THE DRAWINGS. WHERE NOTED (AWWA C-900 RJ) PVC BOLTLESS RESTRAINED PIPE MAY USED.

11E. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL PLUG ALL OPEN PIPE ENDS WITH WATER TIGHT PLUGS AS PER THE 'PREVENTITIVE AND CORRECTIVE MEASURES DURING CONSTRUCTION' SECTION OF THE MOST CURRENT REVISION OF AWWA C-651 AS TO PREVENT THE INFILTRATION OR INTRUSION OF ANY FOREIGN OBJECTS OR MATERIALS. DATE STAMPED DIGITAL PHOTOS SHALL BE PROVIDED FOR EACH WORKDAY DEMONSTRATING THAT PROPER AWWA C-651 METHODS WERE USED TO PLUG ALL OPEN WATER MAIN ENDS. EACH PHOTO SHALL CLEARLY IDENTIFY THE STATION AT WHICH THE PIPE IS PLUGGED. THE STATIONING SHALL BE SHOWN BY THE USE OF A STATION MARKER PLACED AT THE PLUGGED PIPE END.

PHOTOS SHALL BE SUBMITTED ON A DAILY BASIS UNLESS OTHERWISE DEFINED BY THE CWD INSPECTOR OR ENGINEER. ALL PHOTOS TAKEN OVER THE COURSE OF THE PROJECT SHALL BE SUBMITTED BY THE CONTRACTOR AS PART OF THE AS-BUILT SUBMITTAL. AS-BUILTS SHALL BE CONSIDERED INCOMPLETE WITHOUT SAID COLLECTION OF DIGITAL PHOTOS.

11F. ALL PVC PIPE SHALL BE INSTALLED WITH A CONTINUOUS RUN OF INSULATED #12 GAUGE COPPER WIRE TAPED TO THE TOP OF THE PIPE EVERY 5 FEET. BRING TRACE WIRE TO THE SURFACE AT EVERY VALVE BOX, OR HYDRANT (SEE DETAILS). ALL SPLICES OR CONNECTIONS TO THE WIRE ARE TO BE MADE USING APPROVED DIRECT BURY LUGS OR NUTS. SHOULD THE TYPE OF PIPE CHANGE TO DUCTILE IRON PIP, THEN TRACE WIRE SHOULD BE TERMINATED AT THE FIRST VALVE BOX OR HYDRANT AFTER THE TRANSITION IS MADE.

C-011A

DATE: 12-17-2009 BY: RSK

HYDRANTS:

12A. IN ALL HYDRANT INSTALLATIONS THE CONTRACTOR SHALL FACE ALL HYDRANT'S 4" (STEAMER) NOZZLE TOWARD THE PAVEMENT PRIOR TO TESTING AND CHLORINATION OF WATER MAINS. CONTRACTOR SHALL CONSULT WITH THE LOCAL MUNICIPALITY'S ENGINEERING OR SERVICE DEPARTMENT TO OBTAIN HYDRANT MODEL AND NOZZLE THREAD REQUIREMENTS IF NOT INDICATED ON THE APPROVED PLANS.

12B. HYDRANT ASSEMBLIES SHALL BE CONSTRUCTED OF DUCTILE IRON (CL. 52) CEMENT LINED PIPE.

VALVES

13. ALL VALVES SHALL BE AN APPROVED MODEL RESILIENT SEATED GATE VALVES AS PER THE MOST CURRENT VERSION OF AWWA C509 OR C515.

CONNECTIONS:

14. WATER CONNECTIONS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY AND ARE NOT PART OF THE WATER MAIN APPROVAL. ADDITIONAL PERMITS FOR SERVICE CONNECTIONS MUST BE OBTAINED FROM THE DIVISION OF WATER PRIOR TO INSTALLATION OF ANY PORTION OF THE SERVICE CONECTION(S). IT IS THE CONTRACTORS RESPONSIBILITY TO ARRANGE FOR PERMITS FOR ALL SIZE WATER SERVICE CONNECTIONS BEFORE PERFORMING ANY WORK. THE AMOUNT OF THE CHARGES CAN BE OBTAINED FROM THE DIVISION OF WATER, PERMITS AND SALES SECTION AT 216-664-2444 X5203.

15. ONE INCH SERVICE CONNECTIONS SHALL BE PERMITTED TO SERVICE HOMES BASED ON THE FOLLOWING CRITERIA:

* PEAK FLOW DEMANDS DO NOT EXCEED 25 GPM FOR AN INDIVIDUAL HOME/UNIT. INCLUSIVE OF ALL USAGE (FIRE, DOMESTIC AND/OR IRRIGATION) AND
* LENGTH OF ONE INCH CONNECTION DOES NOT EXCEED 50 FEET AS MEASURED FROM THE MAIN TO THE CURB VALVE.

ANY SERVICE REQUESTS DIFFERING FROM THE STATED CRITERIA SHALL REQUIRE THE SUBMITTAL OF A COMPLETE WATER SERVICE APPLICATION. PEAK DEMANDS ARE TO BE ASSESSED ON APPLICATION AND SETBACKS ARE TO SHOWN ON AN ACCOMPANYING SITE PLAN. SITE PLANS SHALL SHOW WATER METER VAULTS IN THE RIGHT OF WAY OR IN AN EASEMENT CONTIGUOUS TO THE RIGHT OF WAY FOR ANY HOMES/UNITS WITH SETBACKS GREATER THAN 150 FEET. EASEMENTS ARE TO BE PROVIDED WITH THE SERVICE CONNECTION APPLICATION SUBMITTAL.

16. ALL WATER MAIN CURB VALVE BOXES & METER VAULTS WILL BE INSTALLED IN GRASS AREAS WHEN POSSIBLE.

17. SERVICE SADDLES SHALL BE USED FOR ALL SERVICE CONNECTIONS. THE OUTLET SHALL BE TAPPED WITH EITHER A.W.W.A. TAPER (C.C.) OR A.W.W.A. F.I.P.T. THREADS. SADDLES SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL APPLICABLE PARTS OF ANSI/AWWA C800-NSF 61 CERTIFIED, AND BE APPROVED BY THE DIVISION OF WATER.

EMERGENCIES:

18. IF A WATER MAIN OR SERVICE CONNECTION BREAK OCCURS DURING CONSTRUCTION AND EMERGENCY ASSISTANCE IS REQUIRED, PLEASE NOTIFY THE DIVISION OF WATER AT 216-664-3060.

C-011B

DATE: 2-4-2009 BY: RSK

CLEVELAND WATER NOTES FOR WATER MAIN INSTALLATION AND/OR REPLACEMENT

DEVELOPERS, ENGINEERS, AND CONTRACTORS ARE TO ABIDE BY THE MOST CURRENT VERSION OF THE CLEVELAND WATER NOTES AND DETAILS. THE MOST UP-TO-DATE VERSION CAN BE FOUND AT WWW.CLEVELANDWATER.COM/CONSTRUCTION/

GENERAL:

1. ALL WATER WORK REQUIRED, WHETHER SHOWN ON THE PLANS OR AS DIRECTED BY CLEVELAND WATER, SHALL BE AT THE EXPENSE OF THE PROJECT UNLESS OTHERWISE AGREED TO BY THE COMMISIONER OF THE CLEVELAND DIVISION OF WATER.

2. THE INFORMATION SHOWN ON THE CLEVELAND DIVISION OF WATER'S SUMMARY OF WORK/CHARGE LETTER, STRIP MAPS, AS BUILT DRAWINGS, AND GIS ARE TAKEN FROM EXISTING AVAILABLE RECORDS, AND THEIR ACCURACY IS NOT GUARANTEED.

3. CALL THE INSPECTION AND ENFORCEMENT UNIT AT 216-664-2342 TO SCHEDULE A PRECONSTRUCTION MEETING AT LEAST 1 WEEK PRIOR TO STARTING CONSTRUCTION. THE OPERATION OF ANY VALVE OR ALTERATION OF ANY PART OF THE WATER SYSTEM BY CONTRACTORS OR THEIR EMPLOYEES IS PROHIBITED WITHOUT THE SUPERVISION OF THE CLEVELAND DIVISION OF WATER INSPECTOR.

4. PRIOR TO REQUESTING CHLORINATION, THE CONTRACTOR SHALL SUPPLY THE CLEVELAND WATER INSPECTOR WITH REDLINE DRAWINGS SHOWING CHANGES MADE FROM THE APPROVED DESIGN DRAWINGS AND ACTUAL MEASUREMENTS. CHLORINATION SHALL NOT OCCUR BEFORE THESE DRAWINGS ARE SUBMITTED.

5. FOR THE PURPOSES OF CHLORINATION AND BACTERIOLOGICAL TESTING OF THE WATER MAINS THE CONTRACTOR SHALL PROVIDE AND INSTALL, AT EACH OF THE CHLORINATION PIT LOCATIONS SHOWN AND AT OTHER LOCATIONS DETERMINED BY CLEVELAND WATER. FLUSHING / SAMPLING TAP SIZES ARE TO BE DETERMINED CLEVLEAND WATER. CHLORINATION PITS SHALL BE SIX (6) FOOT SQUARE AND ARE TO MEET OSHA STANDARDS. NO CUSTOMER TAPS SHALL BE INSTALLED PRIOR TO CHLORINATION.

6. A TWO YEAR WARRANTY, COMMENCING FROM THE DATE OF ACCEPTANCE OF THE FINAL CHLORINATION OF THE WATER MAIN INSTALLATION SHALL BE PROVIDED BY THE BUILDER/DEVELOPER AND/OR CONTRACTOR FOR ALL WATER MAINS AND SERVICE CONNECTION WORK PERFORMED BY THE CONTRACTOR, INCLUDING TAPS IF PERFORMED. SHOULD ANY LEAKS OCCUR AND REPAIRS BE REQUIRED DUE TO DEFECTIVE MATERIAL OR POOR WORKMANSHIP. A LETTER INDICATING THE COMMENCEMENT DATE AND END DATE OF THE WARRANTY SHALL BE INCLUDE WITH THE AS-BUILT SUBMISSION IN NOTE 12.

7. USE BACKFILL MATERIAL AS SPECIFIED AND COMPACT SUFFICIENTLY IN THOSE AREAS WHERE EXISTING MAINS AND WATER SERVICE CONNECTIONS ARE EXPOSED. (SEE CLEVELAND WATER STANDARD DETAIL STD-001)

8. ALL MATERIALS, INCLUDING BUT NOT LIMITED TO WATER MAINS, FIRE HYDRANTS, VALVES, CONNECTION MATERIALS AND OTHER WATER APPURTENANCES, SHALL BE NEW AND UNUSED AND SHALL CONFORM TO THE MOST CURRENT CLEVELAND WATER SPECIFICATIONS. ALL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH CLEVELAND WATER'S STANDARDS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER MAINS AND APPURTENANCES THEREOF WHEN CONSTRUCTING OR CONNECTING THE NEW WATER MAIN. THIS SHALL INCLUDE LEADED JOINTS IN EXISTING FITTINGS WHICH MAY REQUIRE REPLACEMENT FITTINGS AT THE DISCRESION OF THE INSPECTOR IF IT IS DETERMINED THEY WERE DISTURBED. ALL REPAIRS TO DAMAGED EXISTING FACILITIES SHALL BE MADE BY THE CONTRACTOR, AT THE PROJECT' EXPENSE, TO THE SATISFACTION OF CLEVELAND WATER.

10. ALL HYDROSTATIC PRESSURE TESTING SHALL BE DONE BY THE CONTRACTOR IN THE PRESENCE OF THE CLEVELAND WATER INSPECTOR. THE HYDROSTATIC TEST PRESSURE SHALL BE 75 PSI ABOVE THE STATIC PRESSURE PREVAILING AT THE SITE, BUT IN NO CASE LESS THAN 150 PSI. THE PRESSURE TEST SHALL BE FOR A DURATION OF TWO (2) HOURS WITH THE PRESSURE BEING MAINTAINED WITHIN 5 PSI OF THE REQUIRED TEST PRESSURE. SHOULD THE PRESSURE TEST FAIL THE CONTRACTOR SHALL FIND AND CORRECT THE DEFICIENCY(IES) TO THE SATISFACTION OF CLEVELAND WATER AND REPEAT THE TWO (2) HOUR PRESSURE TEST.

11. ALL BURIED WATER MAINS, FITTINGS, VALVES, FIRE HYDRANT BRANCH PIPING AND APPURTENANCES SHALL BE ENCASED WITH POLYETHYLENE WRAPPING IN ACCORDANCE WITH THE MOST CURRENT REVISION OF ANSI/AWWA C-105/A21.5 INSTALLATION METHOD "A". ALTERNATE INSTALLATION METHOD A FOR WET TRENCH CONDITIONS SHALL BE USED WHEN WATER MAINS ARE INSTALLED IN UNPAVED LOCATIONS SUCH AS TREE LAWNS AND EASEMENTS TRAVERSING PRIVATE PROPERTY.

12. THE PROJECT'S PROFESSIONAL ENGINEER OR A DESIGNATED PROFESSIONAL SURVEYOR SHALL OBTAIN ACTUAL FIELD MEASUREMENTS OF THE MAIN DURING INSTALLATION AND SHALL FURNISH THE CLEVELAND WATER INSPECTOR WITH AS-BUILT DRAWINGS MEETING CLEVELAND WATER STANDARDS WITHIN 30 DAYS OF THE WATER MAIN GOING INTO SERVICE AND ALL TAPS/RETAPS BEING MADE. ONE HARD COPY AND ONE PDF COPY SHALL BE PROVIDED. DRAWINGS SHALL BE SIGNED, DATED, AND STAMPED WITH THE ENGINEER OR SURVEYOR'S SEAL. REDLINE DRAWINGS ARE NOT SUFFICIENT. CLEVELAND WATER RESERVES THE RIGHT TO WITHHOLD PAYMENT AND/OR APPROVAL OF FUTURE WORK IF AS-BUILTS ARE NOT SUBMITTED.

WATER MAINS:

13. ALL PIPE, UNLESS OTHERWISE APPROVED BY CLEVELAND WATER, SHALL BE DUCTILE IRON, MINIMUM CLASS 52, CEMENT LINED HAVING PUSH-ON JOINTS WITH RADIALLY COMPRESSED RUBBER RING GASKET AND INSTALLED AS PER THE MOST CURRENT REVISION OF AWWA C600.

14. ALL FITTINGS, UNLESS OTHERWISE CALLED FOR, SHALL BE APPROVED DUCTILE IRON, CLASS 350, CEMENT LINED OR FUSION BONDED EPOXY COATED. ALL FITTINGS AND PIPE CONNECTED TO FITTINGS SHALL BE RESTRAINED USING A "RETAINED" MECHANICAL JOINT CONFORMING TO THE MATERIAL AND PERFORMANCE REQUIREMENTS OF ANSI/AWWA C-110/A21.10 AND ANSI/AWWA C-111/A21.11, OR "COMPACT" FITTINGS IN ACCORDANCE WITH ANSI/AWWA C-153/A21.53. EXCEPT FOR ANCHOR TEES, REDUCERS OR OTHER SPECIAL CIRCUMSTANCES WHEN BY CLEVELAND WATER, ALL FITTINGS ARE TO HAVE BELL ENDS.

15. ALL BOLTS AND NUTS ON ALL "RETAINED" MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING.

16. WHERE SHOWN ON THE PLANS, OR WHEN OTHERWISE CALLED FOR, PIPE AND FITTINGS SHALL HAVE AN APPROVED "TYPE I" OR "TYPE II" BOLTLESS RESTRAINED PUSH-ON JOINTS TO THE LIMITS SHOWN ON THE DRAWINGS.

17. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL PLUG ALL OPEN PIPE ENDS WITH WATER TIGHT PLUGS AS PER THE "PREVENTITIVE AND CORRECTIVE MEASURES DURING CONSTRUCTION" SECTION OF THE MOST CURRENT REVISION OF AWWA C-651 AS TO PREVENT THE INFILTRATION OR INTRUSION OF ANY FOREIGN OBJECTS OR MATERIALS. DATE STAMPED DIGITAL PHOTOS SHALL BE PROVIDED FOR EACH WORKDAY DEMONSTRATING THAT PROPER AWWA C-651 METHODS WERE USED TO PLUG ALL OPEN WATER MAIN ENDS. EACH PHOTO SHALL CLEARLY IDENTIFY THE STATION AT WHICH THE PIPE IS PLUGGED. THE STATIONING SHALL BE SHOWN BY THE USE OF A STATION MARKER PLACED AT THE PLUGGED PIPE END.

PHOTOS SHALL BE SUBMITTED ON A DAILY BASIS UNLESS OTHERWISE DEFINED BY THE CLEVELAND WATER INSPECTOR OR ENGINEER. ALL PHOTOS TAKEN OVER THE COURSE OF THE PROJECT SHALL BE SUBMITTED BY THE CONTRACTOR AS PART OF THE AS-BUILT SUBMITTAL. PHOTOS ARE TO INCLUDE STATIONING MARKERS. AS-BUILTS SHALL BE DEEMED INCOMPLETE WITHOUT SAID COLLECTION OF DIGITAL PHOTOS.

HYDRANTS:

18. IN ALL HYDRANT INSTALLATIONS THE CONTRACTOR SHALL FACE ALL HYDRANT'S 4" (STEAMER) NOZZLE TOWARD THE PAVEMENT PRIOR TO TESTING AND CHLORINATION OF WATER MAINS. ONLY CLEVELAND WATER APPROVED HYDRANT MODELS SHALL BE INSTALLED. CONTRACTOR SHALL CONSULT WITH THE LOCAL MUNICIPALITY'S ENGINEERING OR SERVICE DEPARTMENT TO OBTAIN HYDRANT NOZZLE THREAD REQUIREMENTS IF NOT INDICATED ON THE APPROVED PLANS.

VALVES:

19. ALL VALVES SHALL BE AN APPROVED MODEL RESILIENT SEATED GATE VALVES AS PER THE MOST CURRENT VERSION OF AWWA C509 OR C515. VALVE OPERATING NUTS SHALL BE TAPERED (1 7/8" TO 2" FROM TOP TO BOTTOM) AND 2" DEEP. VALVES MORE THAN 10 YEARS OLD AT TIE IN POINTS TO EXISTING MAINS SHALL BE REPLACED AT THE PROJECT'S EXPENSE UNLESS OTHERWISE DIRECTED.

SERVICE CONNECTIONS:

20. ANY CITYSIDE LEAD SERVICE CONNECTION ENCOUNTERED SHALL BE REPLACED WITH TYPE K COPPER OR OTHER APPROVED MATERIAL. IF OWNERSIDE LEAD WILL REMAIN, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CWD BY CALLING 216-664-2882 AND LEAVING A CLEVELAND WATER SUPPLIED CUSTOMER NOTIFICATION DOORHANGER ON ALL ACCESSIBLE POINTS OF ENTRY TO THE HOME.

21. AS PART OF THE AS BUILT SUBMISSION IN NOTE 12, THE CONTRACTOR SHALL PROVIDE A TABLE SHOWING ALL EXISTING CONNECTIONS, IDENTIFIED BY CLEVELAND WATER CONNECTION NUMBER, SHOWING THE FOUND CONNECTION MATERIAL FOR BOTH THE CITYSIDE AND OWNERSIDE CONNECTION, AS WELL AS THE NEW CONNECTION MATERIAL FOR ALL CONNECTIONS REPLACED. THE TABLE SHALL ALSO NOTE ANY REVISED CONNECTION MEASUREMENTS AND SIZES. A SAMPLE TABLE WILL BE PROVIDED. THE SUBMISSION SHALL BE IN MICRSOFT EXCEL FORMAT. CLEVELAND WATER SHALL REQUIRE THE DELIVERY AND ACCEPTANCE OF THIS TABLE BEFORE THE PRESSURE TEST AND CHLORINATION/DISINFECTION OF THE MAIN WILL BE PERMITTED.

22. NEW WATER SERVICE CONNECTIONS LOCATIONS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY AND ARE NOT PART OF THE WATER MAIN APPROVAL. THE SPECIFIC LOCATION FOR EACH CONNECTION WILL BE DETERMINED BY CLEVELAND WATER PRIOR TO THE TAPS BEING INSTALLED. ALL PERMITS FOR TAPS AND METERS FOR PARCELS ASSOCIATED WITH THE WATER MAINS INSTALLED ON THIS PROJECT ARE TO BE OBTAINED BY THE LAND OWNER OF SAID IMPROVEMENT PLANS. IT IS THE LAND OWNERS RESPONSIBILITY TO ARRANGE FOR OBTAINING PERMITS FOR ALL WATER SERVICE CONNECTIONS BEFORE ANY SERVICE CONNECTION WORK MAY PROCEED. ALL FEES CAN BE OBTAINED FROM THE CLEVELAND WATER PERMITS AND SALES SECTION AT 216-664-3130 PROMPT #7 OR 216-664-2444 X75209.

ACCOUNTS SHALL BE INITIATED IN THE LAND OWNER'S NAME AS PART OF THE PERMITTING PROCESS. ALL RESPONSIBILITIES ASSOCIATED WITH EACH WATER SERVICE, INCLUDING, THE OWNER SIDE INSPECTIONS, METER SET/METER PIPING INSPECTION AND THE METER INSTALLATION SHALL BE THE RESPONSIBILITY OF SAID OWNER.

METERS INSTALLATIONS WILL NOT BE AUTHORIZED TO BE INSTALLED UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED. ESTIMATED BILLS MAY ENSUE IF A HOME IS IDENTIFIED AS HAVING WATER SERVICE BUT NO METER HAS BEEN INSTALLED. IF NEW OWNERS, ONCE PARCELS ARE SOLD OFF AND TRANSFER TITLE, DO NOT CONTACT CLEVELAND WATER TO ESTABLISH ACCOUNTS IN THEIR NAME, ACCOUNTS AND THEIR ASSOCIATED BILLS WILL REMAIN IN THE NAME OF OUR LAST OWNER OF RECORD WHICH MAY BE THE DEVELOPER OR BUILDER. IT IS THE RESPONSIBILITY OF THE NEW OWNER TO TRANSFER ACCOUNTS INTO THEIR NAME WHEN THE PROPERTIES LEGALLY TRANSFER. UPON TRANSFER OF PROPERTY, SELLER OF PROPERTY MUST COMMUNICATE ALL UNCOMPLETED PORTIONS OF THE REFERENCED RESPONSIBILITIES TO THE NEW OWNER.

23. ONE INCH SERVICE CONNECTIONS SHALL BE PERMITTED TO SERVICE NEW HOMES (AS SHOWN ON APPROVED WATER MAIN EXTENSION PLANS) BASED ON THE FOLLOWING CRITERIA:

- PEAK FLOW DEMANDS DO NOT EXCEED 25 GPM FOR AN INDIVIDUAL HOME/UNIT. INCLUSIVE OF ALL USAGE (DOMESTIC AND/OR IRRIGATION),
- LENGTH OF ONE INCH CONNECTION DOES NOT EXCEED 75 FEET AS MEASURED FROM THE MAIN TO THE POINT OF ENTRY INTO THE PROPOSED HOME/UNIT.
- THE CONNECTIONS DO NOT INCLUDE LIMITED AREA OR NFPA 13D SPRINKLER SYSTEMS

ANY SERVICE REQUESTS DIFFERING FROM THE STATED CRITERIA SHALL REQUIRE THE SUBMITTAL OF A COMPLETE WATER SERVICE APPLICATION FOR EACH WATER SERVICE REQUESTED.

24. ALL CURB VALVE BOXES & METER VAULTS WILL BE INSTALLED IN GRASS AREAS WHEN POSSIBLE. CURB VALVES IN EASEMENTS SHALL BE PLACED APPROXIMATELY 3 FEET OFF THE WATER MAIN. IF VALVE BOXES OR METER VAULTS ARE INSTALLED OUTSIDE OF A DEDICATED RIGHT OF WAY OR EASEMENT FOR THE PURPOSES OF WATER SUPPLY, A STANDARD CLEVELAND EASEMENT FOR A VAULT SHALL BE PROVIDED.

EMERGENCIES:

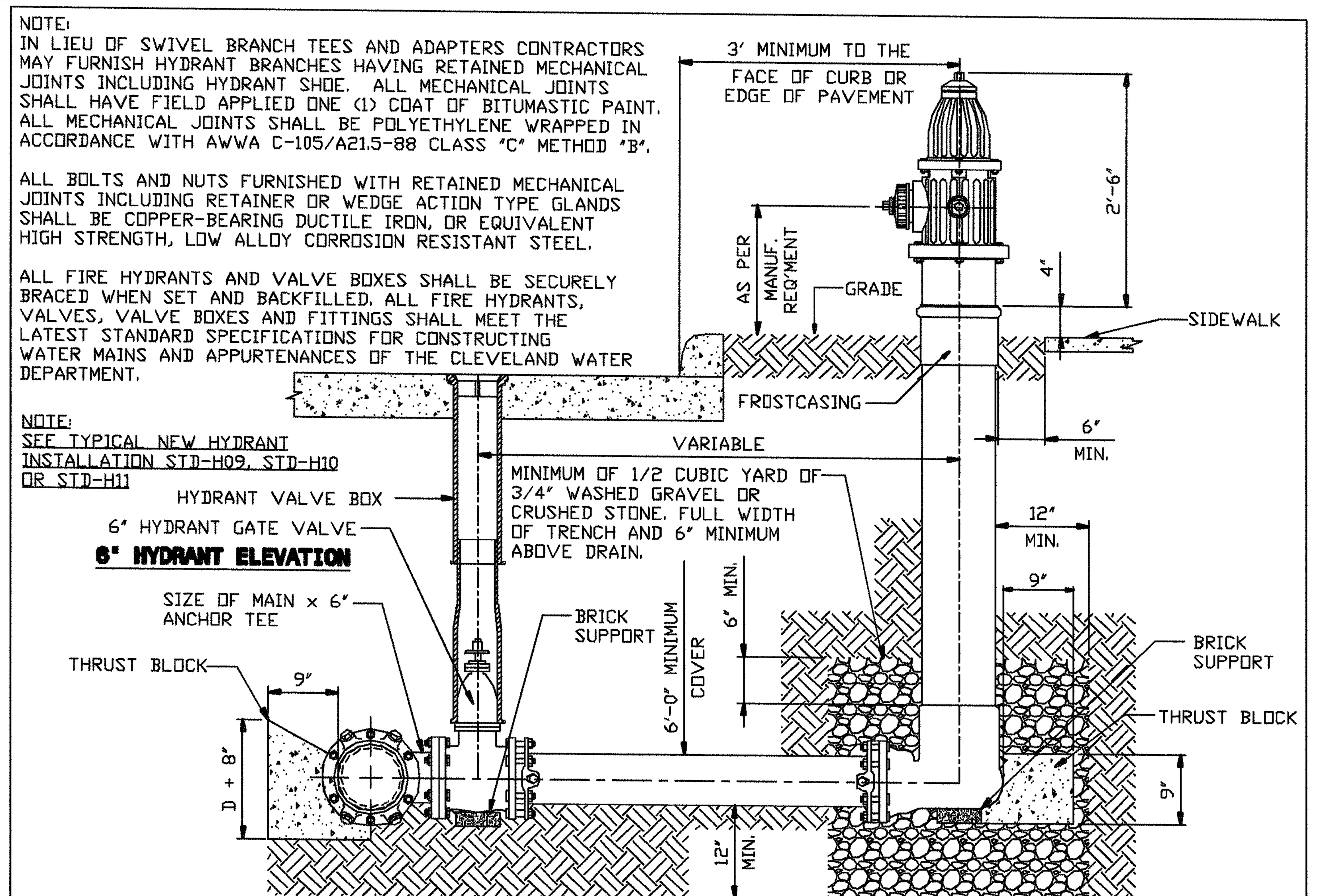
25. IF A WATER MAIN OR SERVICE CONNECTION BREAK OCCURS DURING CONSTRUCTION AND EMERGENCY ASSISTANCE IS REQUIRED, PLEASE NOTIFY CLEVELAND WATER AT 216-664-3060. THIS LINE IS AVAILABLE 24/7/365

DATE: 11/28/2017 BY: FSR STD-011

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423
DAVEY Resource Group

HUNTINGTON PARK PHASE 4
WATER NOTES & DETAILS

PROJECT NUMBER	1966
DATE	2021-09-02



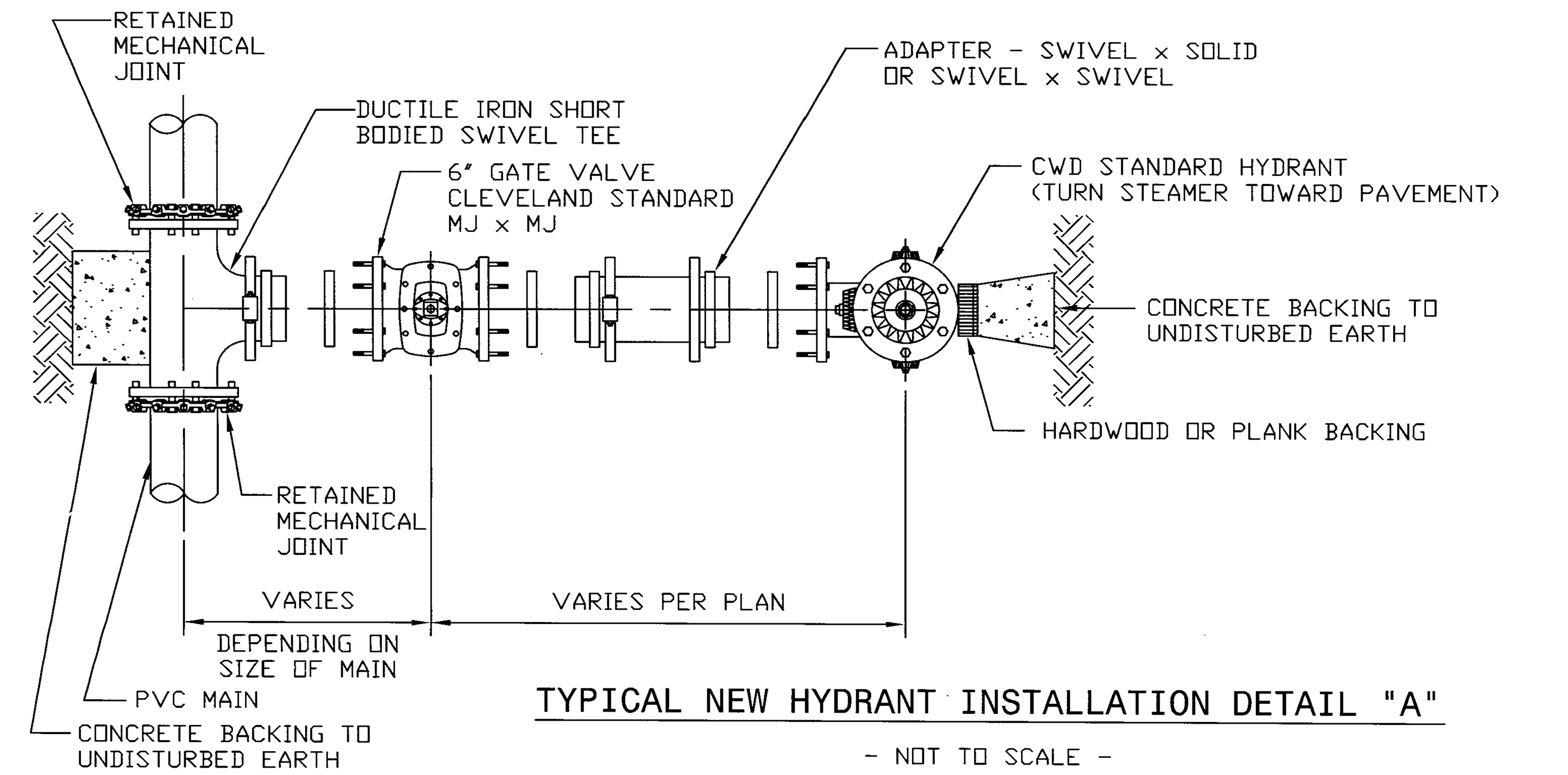
NOTE:
IN LIEU OF SWIVEL BRANCH TEES AND ADAPTERS CONTRACTORS MAY FURNISH HYDRANT BRANCHES HAVING RETAINED MECHANICAL JOINTS INCLUDING HYDRANT SHOE. ALL MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINT. ALL MECHANICAL JOINTS SHALL BE POLYETHYLENE WRAPPED IN ACCORDANCE WITH AWWA C-105/A21.5-88 CLASS "C" METHOD "B".

ALL BOLTS AND NUTS FURNISHED WITH RETAINED MECHANICAL JOINTS INCLUDING RETAINER OR WEDGE ACTION TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.

ALL FIRE HYDRANTS AND VALVE BOXES SHALL BE SECURELY BRACED WHEN SET AND BACKFILLED. ALL FIRE HYDRANTS, VALVES, VALVE BOXES AND FITTINGS SHALL MEET THE LATEST STANDARD SPECIFICATIONS FOR CONSTRUCTING WATER MAINS AND APPURTENANCES OF THE CLEVELAND WATER DEPARTMENT.

NOTE:
SEE TYPICAL NEW HYDRANT INSTALLATION STD-H09, STD-H10 OR STD-H11

STD-H13 | DATE: 2-23-2005 | BY: RSK



TYPICAL NEW HYDRANT INSTALLATION DETAIL "A"

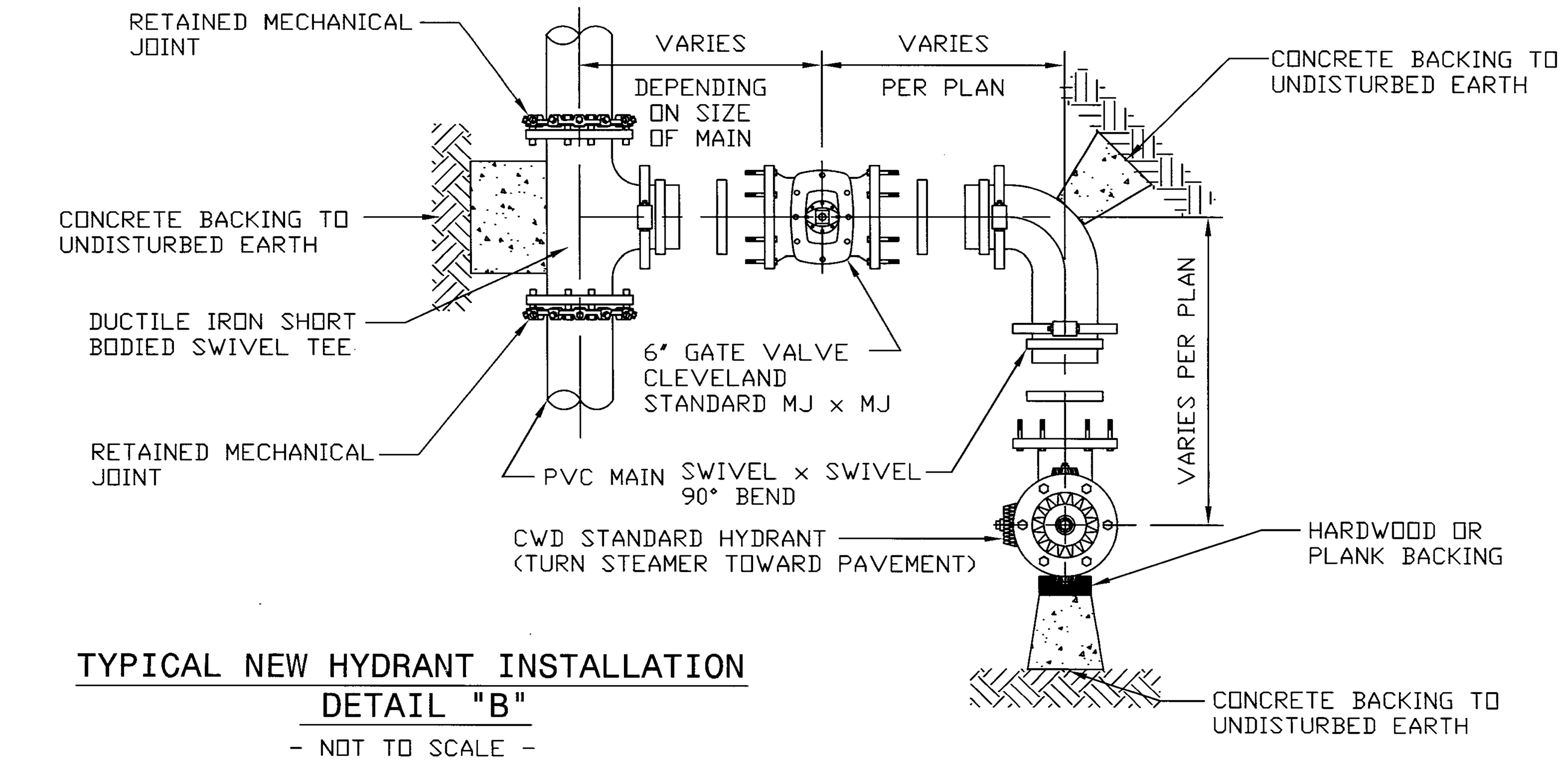
- NOT TO SCALE -

NOTE: ALL MATERIAL SHALL BE DUCTILE IRON (CL. 52) CEMENT LINED PIPE.

IN LIEU OF SWIVEL BRANCH TEES AND ADAPTERS CONTRACTORS MAY FURNISH HYDRANT BRANCHES HAVING RETAINED MECHANICAL JOINTS INCLUDING HYDRANT SHOE. ALL MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINT. ALL MECHANICAL JOINTS SHALL BE POLYETHYLENE WRAPPED IN ACCORDANCE WITH AWWA C-1-5/A21.5-88 CLASS "C" METHOD "B".

ALL BOLTS AND NUTS FURNISHED WITH RETAINED MECHANICAL JOINTS INCLUDING RETAINER OR WEDGE ACTION TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.

PVC-H09 | DATE: 3-4-2002 | BY: RSK



TYPICAL NEW HYDRANT INSTALLATION DETAIL "B"

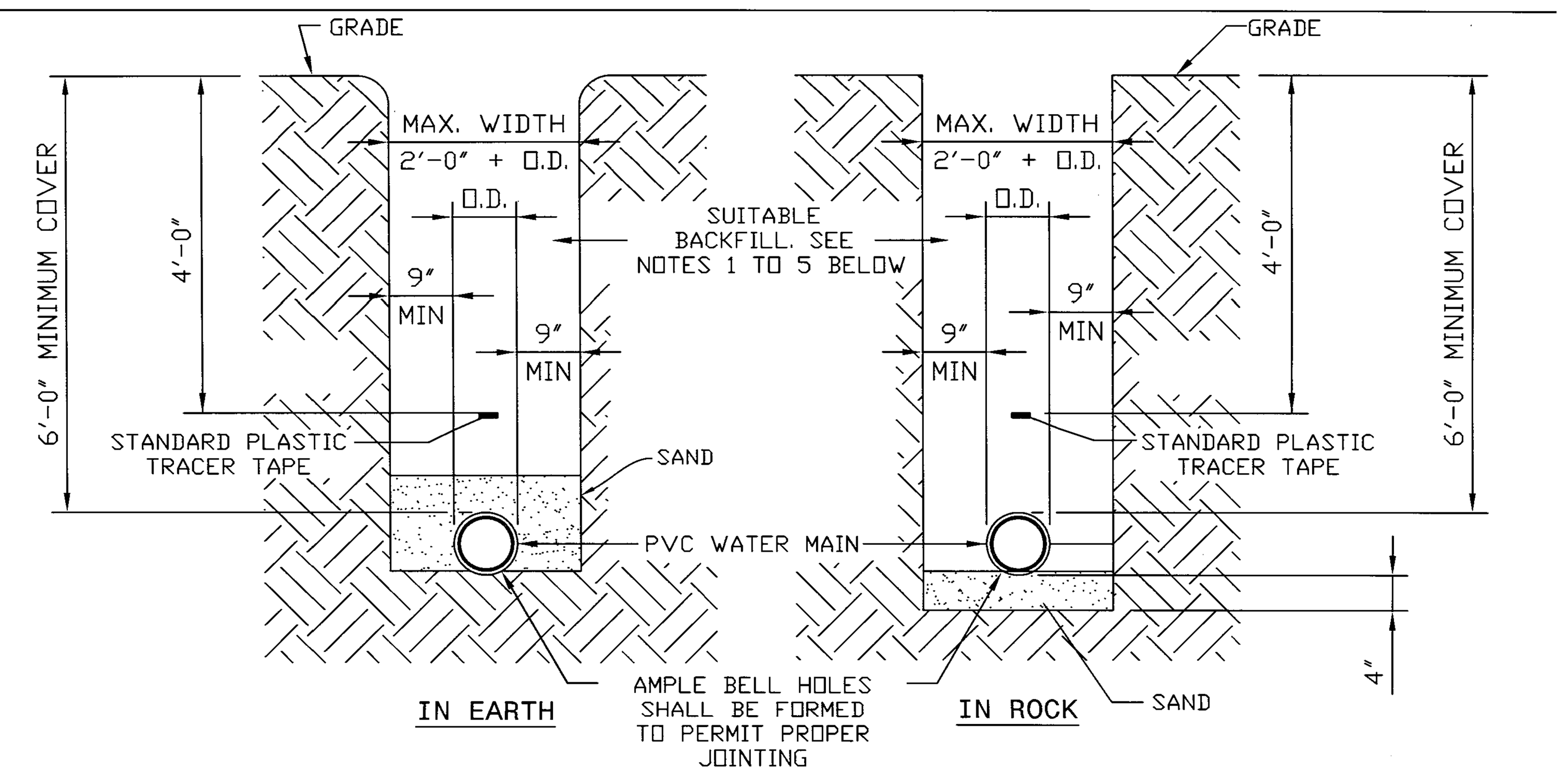
- NOT TO SCALE -

NOTE: ALL MATERIAL SHALL BE DUCTILE IRON (CL. 52) CEMENT LINED PIPE.

IN LIEU OF SWIVEL BRANCH TEES AND ADAPTERS CONTRACTORS MAY FURNISH HYDRANT BRANCHES HAVING RETAINED MECHANICAL JOINTS INCLUDING HYDRANT SHOE. ALL MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINT. ALL MECHANICAL JOINTS SHALL BE POLYETHYLENE WRAPPED IN ACCORDANCE WITH AWWA C-1-5/A21.5-88 CLASS "C" METHOD "B".

ALL BOLTS AND NUTS FURNISHED WITH RETAINED MECHANICAL JOINTS INCLUDING RETAINER OR WEDGE ACTION TYPE GLANDS SHALL BE COPPER-BEARING DUCTILE IRON, OR EQUIVALENT HIGH STRENGTH, LOW ALLOY CORROSION RESISTANT STEEL.

PVC-H10 | DATE: 6-11-2001 | BY: RSK

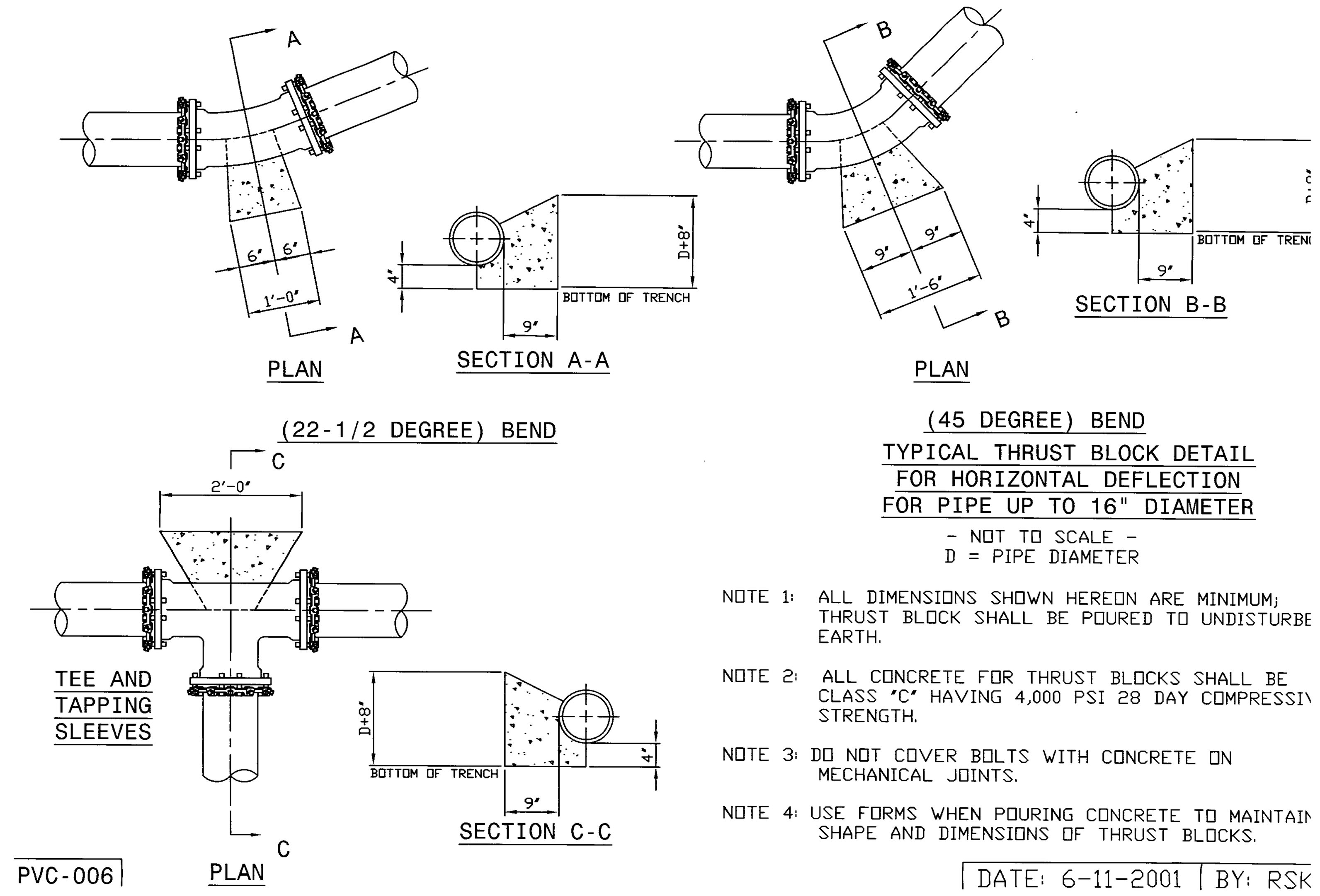


WATER MAIN TRENCH DETAILS

- NOT TO SCALE -

NOTES:
1) SUITABLE BACKFILL SHALL CONSIST OF EXCAVATED MATERIAL FREE OF ROCK (>3"), FROZEN EARTH AND DEBRIS. THE BACKFILL SHALL NOT BE ALLOWED TO FREE-FALL ONTO THE PREVIOUSLY PLACED PIPE. THE CONTRACTOR SHALL CONSOLIDATE THE BACKFILL IN SUCH A MANNER TO ENSURE THE MINIMUM POSSIBLE SETTLEMENT. PREMIUM BACKFILL IS REQUIRED UNDER EXISTING OR FUTURE PAVEMENTS, SIDEWALKS, AND/OR DRIVES OR WHEN REQUIRED BY THE LOCAL MUNICIPALITY. PREMIUM BACKFILL SHALL BE FULL DEPTH OF THE TRENCH.
2) PREMIUM BACKFILL SHALL BE LIMESTONE SCREENINGS GRADED PER ODOT 304.02 OR ODOT 411. NO SLAG IS PERMITTED.
3) CONTRACTOR SHALL USE SPECIAL CARE IN PLACING THE BACKFILL SO AS TO AVOID INJURING THE PIPE, DISTORTING OR MOVING THE PIPE WHEN PLACING THE BACKFILL.
4) MINIMUM COMPACTION FOR PREMIUM BACKFILL SHALL BE 95% STANDARD PROCTOR.
5) PAVEMENT, SIDEWALK OR DRIVES TO BE INSTALLED IN ACCORDANCE WITH LOCAL MUNICIPALITY'S SPECIFICATIONS.

PVC-001 | DATE: 11-1-09 | BY: DR



TYPICAL THRUST BLOCK DETAIL FOR HORIZONTAL DEFLECTION FOR PIPE UP TO 16" DIAMETER

- NOT TO SCALE -
D = PIPE DIAMETER

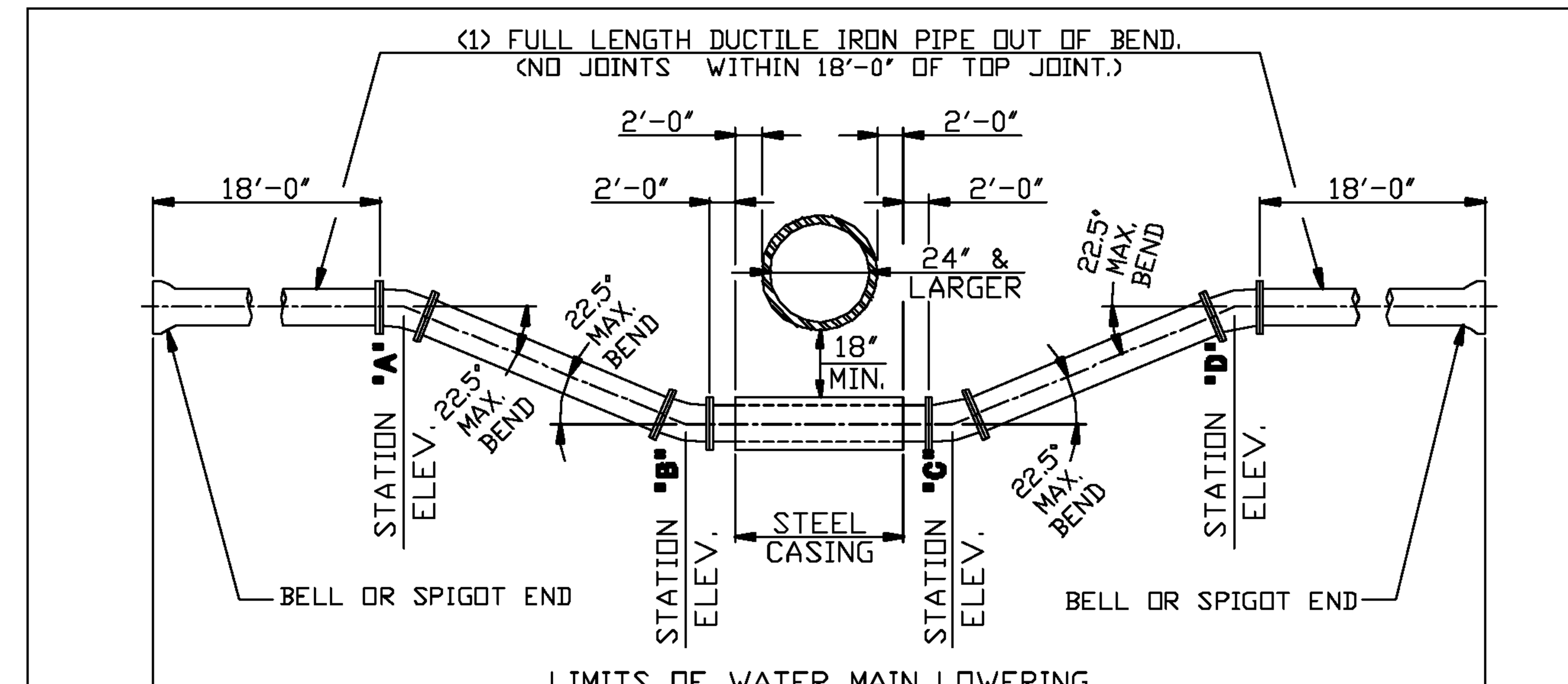
NOTE 1: ALL DIMENSIONS SHOWN HEREON ARE MINIMUM; THRUST BLOCK SHALL BE POURED TO UNDISTURBE EARTH.

NOTE 2: ALL CONCRETE FOR THRUST BLOCKS SHALL BE CLASS "C" HAVING 4,000 PSI 28 DAY COMPRESSIV STRENGTH.

NOTE 3: DO NOT COVER BOLTS WITH CONCRETE ON MECHANICAL JOINTS.

NOTE 4: USE FORMS WHEN POURING CONCRETE TO MAINTAIN SHAPE AND DIMENSIONS OF THRUST BLOCKS.

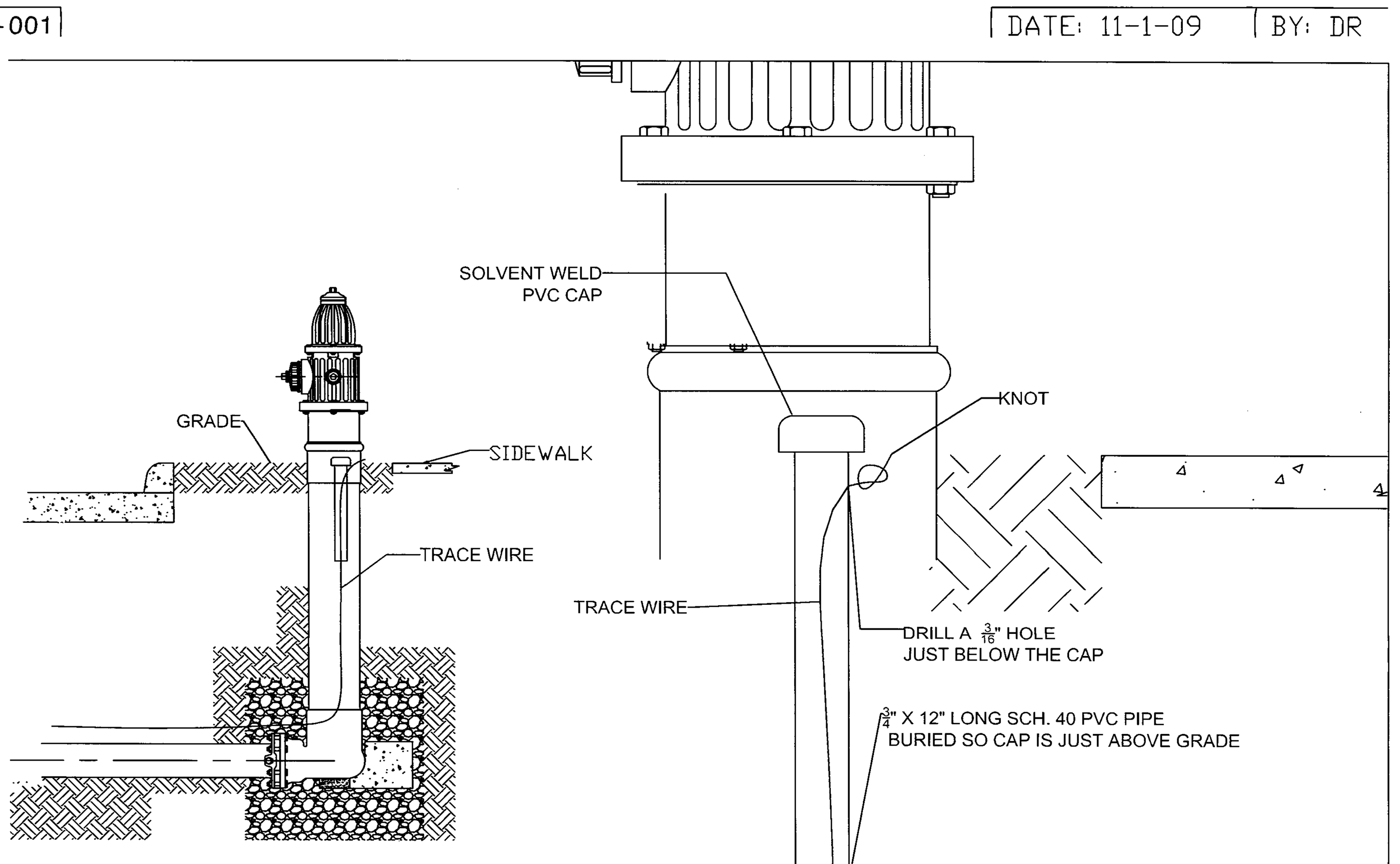
PVC-006 | DATE: 6-11-2001 | BY: RSK



NOTE:
1) WATER MAIN SHALL BE DUCTILE IRON, MINIMUM CLASS 52, CEMENT LINED PUSH-ON JOINT PIPE WITH RETAINED MECHANICAL JOINT DUCTILE IRON CLASS 350, CEMENT LINED RETAINED MECHANICAL JOINT FITTINGS.
2) WHERE DEPTH OF LOWERING REQUIRES AN INTERMEDIATE JOINT BETWEEN STATIONS "A" & "B" AND/OR "C" & "D" THE ENTIRE LOWERING SHALL BE MADE WITH DUCTILE IRON, MINIMUM CLASS 52, CEMENT LINED PIPE AND DUCTILE IRON CLASS 350, CEMENT LINED FITTINGS **ALL** HAVING BOLTLESS RESTRAINED PUSH-ON JOINTS, TYPE I.
3) WHERE LENGTH OF LOWERING UNDER OBSTRUCTION(S) REQUIRES AN INTERMEDIATE JOINT **ONLY** BETWEEN STATIONS "B" & "C", AND PIPE JOINTS ARE AS INDICATED IN NOTE "1" ABOVE, THAT INTERMEDIATE JOINT(S) SHALL BE MADE WITH A BOLTLESS RESTRAINED PUSH-ON JOINT, TYPE II.
4) WHERE LENGTH OF LOWERING UNDER OBSTRUCTION(S) REQUIRES AN INTERMEDIATE JOINT **ONLY** BETWEEN "B" AND "C" AND PIPE JOINTS ARE AS INDICATED IN NOTE "2" ABOVE, THAT INTERMEDIATE JOINT(S) SHALL BE MADE WITH A BOLTLESS RESTRAINED PUSH-ON JOINT, TYPE I.

DETAIL FOR WATER MAIN LOWERING UNDER OBSTRUCTIONS 24" & LARGER IN DIAMETER OR WIDTH FOR "NEW CONSTRUCTION"

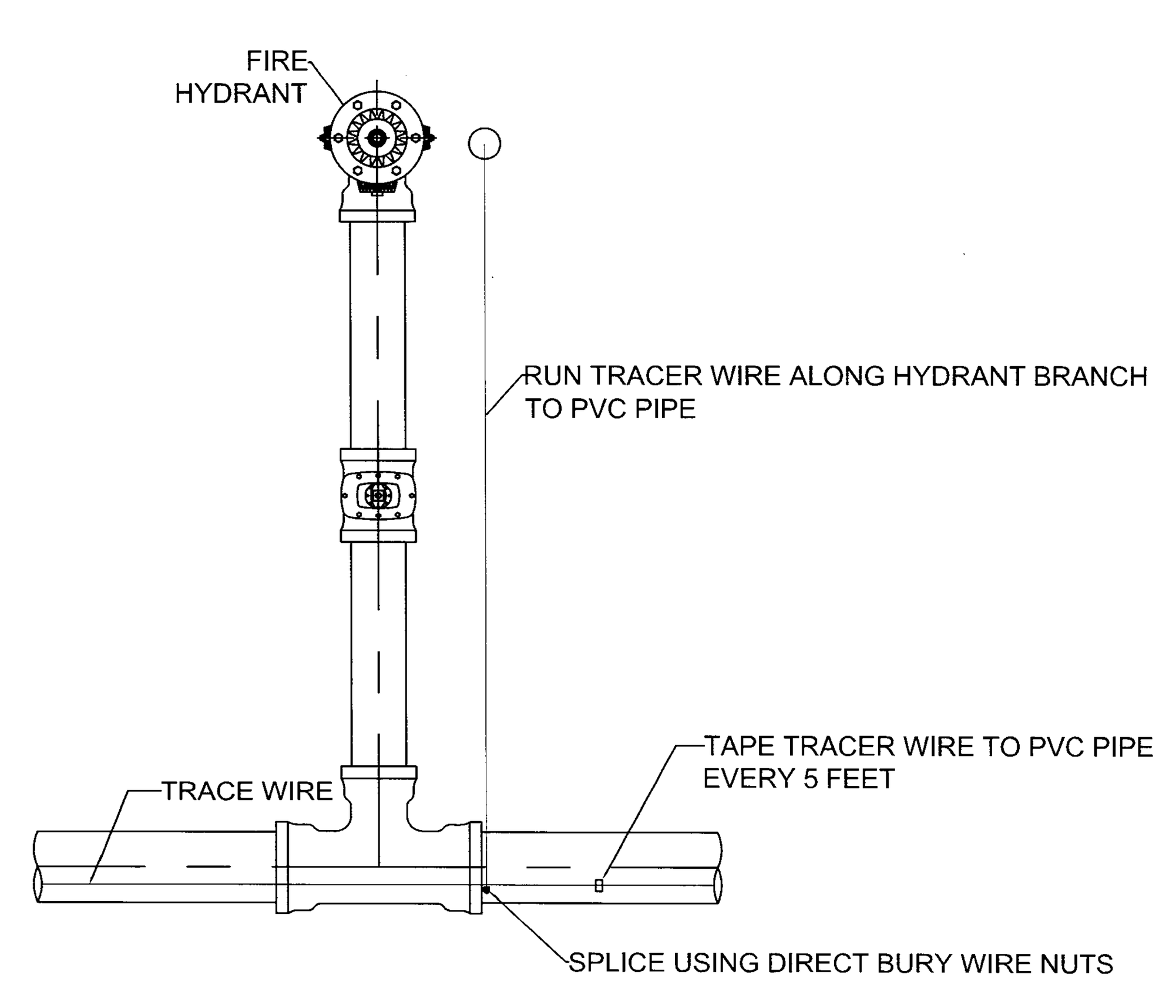
STD-L05 | - NOT TO SCALE - | DATE: 10-1-97 | BY: RSK



TRACER WIRE AT HYDRANT

- NOT TO SCALE -

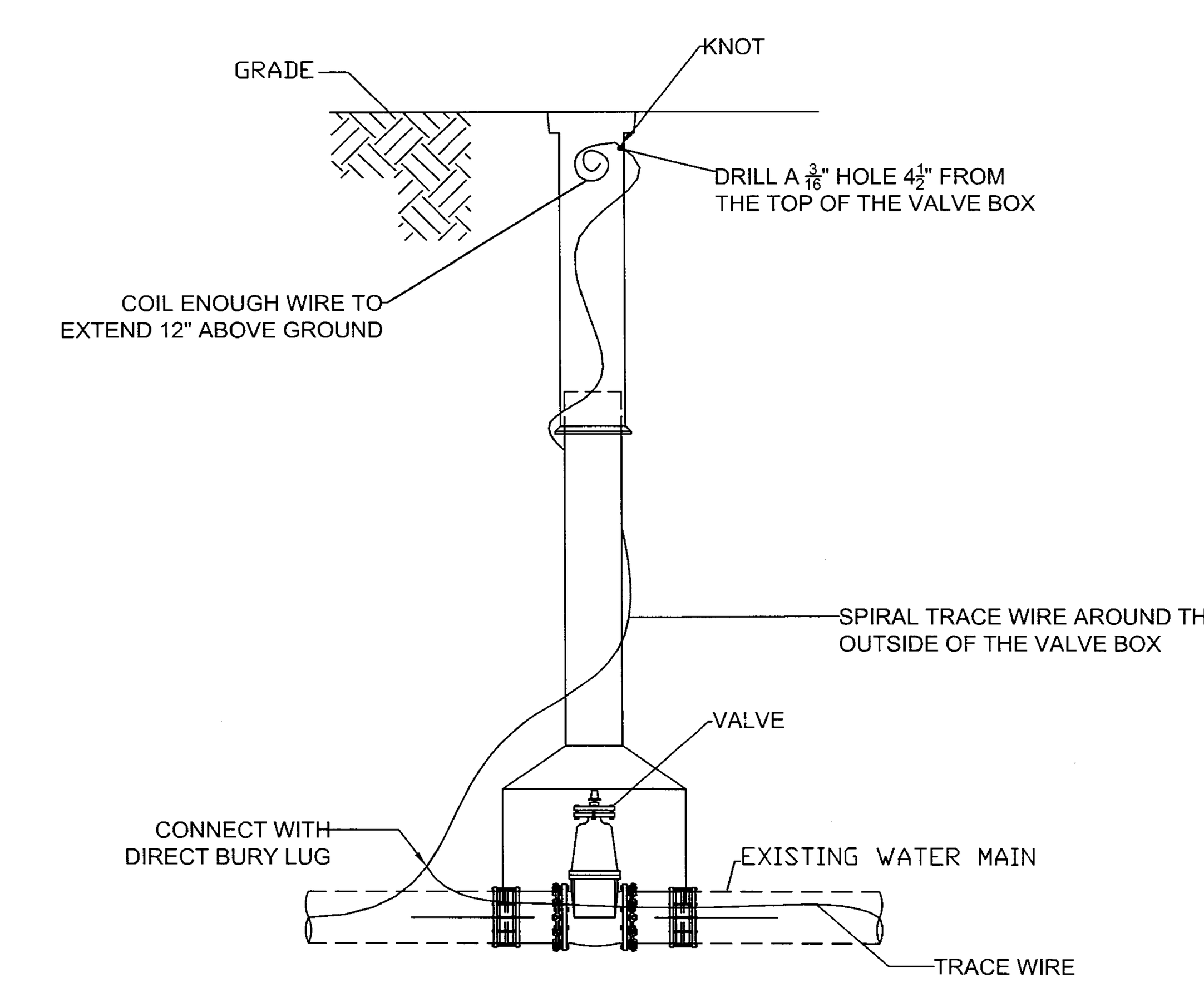
PVC-TW01 | DATE: 11-1-09 | BY: DCR



TRACER WIRE AT HYDRANT TEE

- NOT TO SCALE -

PVC-TW02 | DATE: 11-1-09 | BY: DCR



TRACER WIRE AT LINE VALVE BOX

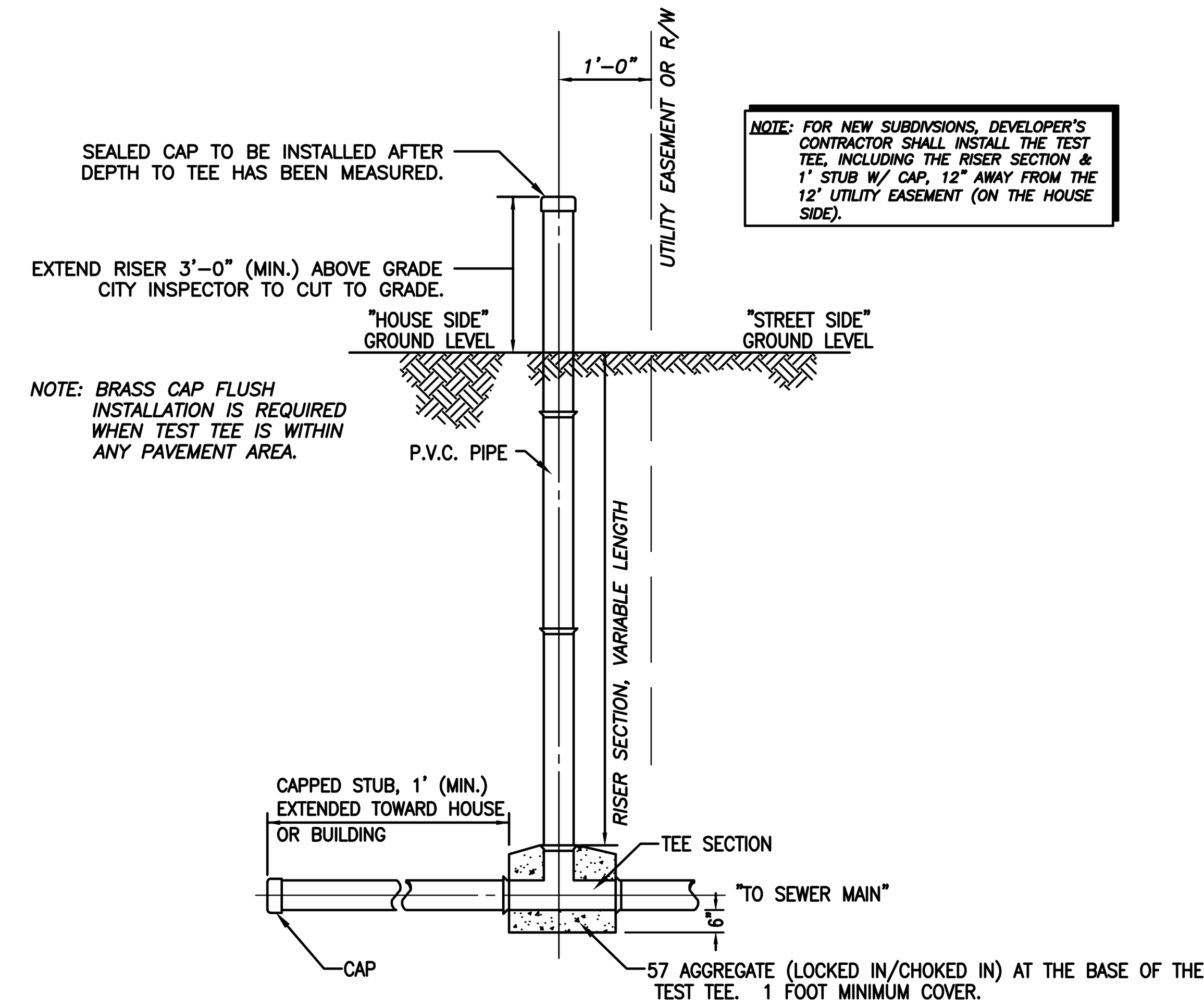
- NOT TO SCALE -

PVC-TW03 | DATE: 11-1-09 | BY: DCR

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

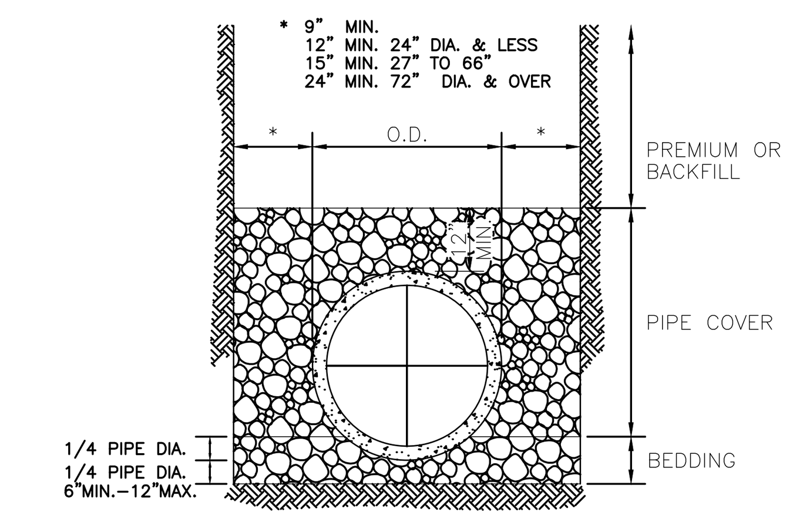
HUNTINGTON PARK PHASE 4
WATER NOTES & DETAILS

PROJECT NUMBER: 1966
DATE: 2021-09-02

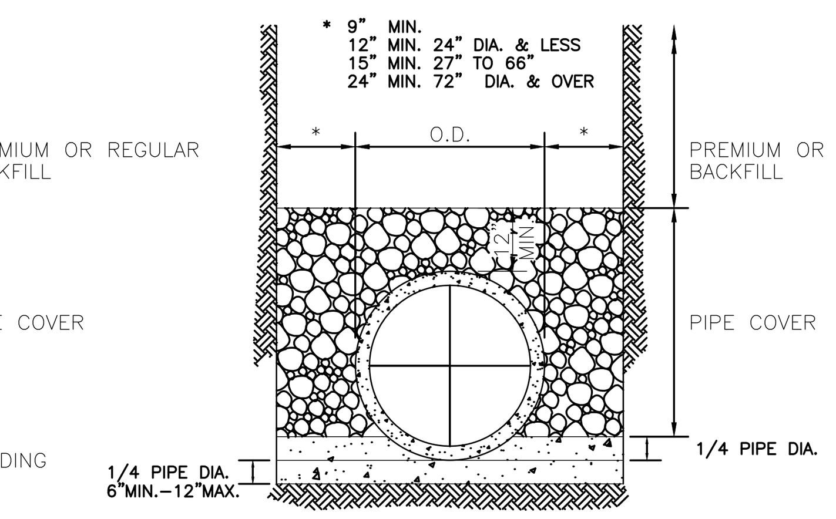


SEWER TEST TEE

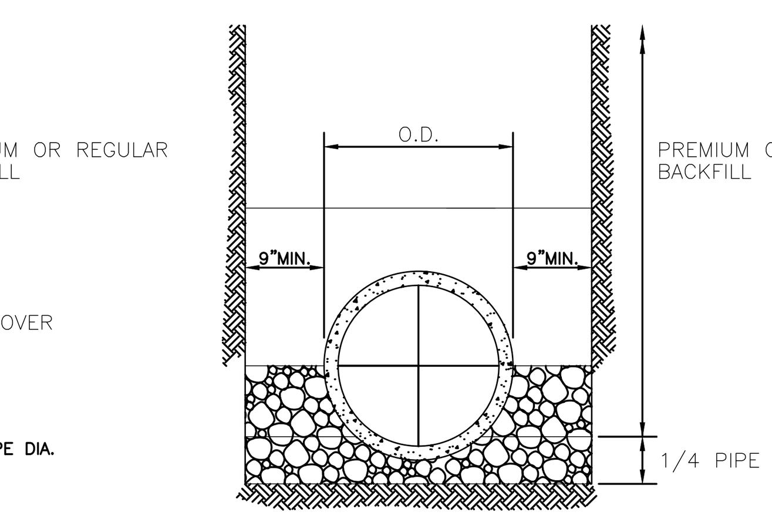
NOT TO SCALE



TYPICAL TRENCH DETAIL
FLEXIBLE PIPE



TYPICAL TRENCH DETAIL
WITH CONCRETE CRADLE



TYPICAL TRENCH DETAIL
FOR CONCRETE OR DUCTILE IRON PIPE

NOTES

PREMIUM BACKFILL SHALL CONSIST OF COARSE INTERLOCKING AGGREGATE NO. 57, 6, 67, 68, 7, 78, 8 AND LIMESTONE SCREENINGS. NO SLAG PERMITTED.

PIPE COVER SHALL CONSIST OF COARSE INTERLOCKING AGGREGATE NO. 57, 6, 67, 68, 7, 78 OR 8.

BEDDING SHALL CONSIST OF COARSE INTERLOCKING AGGREGATE NO. 57, 6, 67, 68, 7, 78 OR 8 FOR 60" OR SMALLER DIAMETER PIPE, FOR 66" OR LARGER DIAMETER PIPE, NO.4 AGGREGATE MAY BE USED.

TRENCH WIDTH FOR TRENCH WITH CONCRETE CRADLE SHALL CONFORM TO TYPE I BEDDING, CRADLE WIDTH TO BE O.D. + 9" ON EACH SIDE OF PIPE.

FOR CONCRETE AND DUCTILE IRON PIPE, PIPE COVER IS TO THE SPRING-LINE OR GREATER.

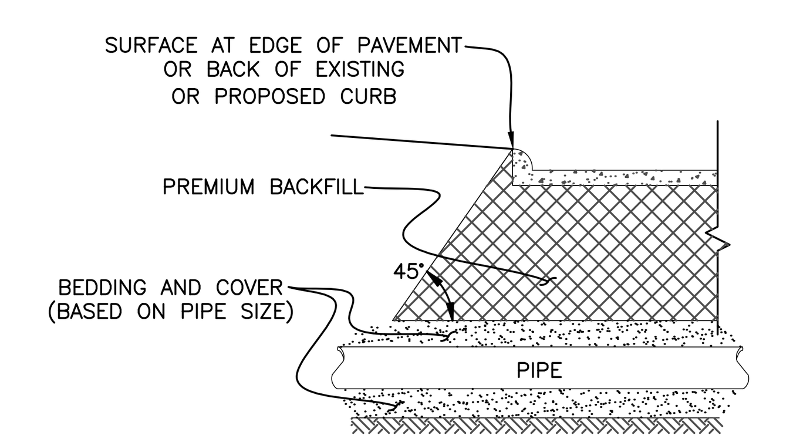
IN PAVED AREAS, COURSE INTERLOCKING AGGREGATE TO THE TOP OF THE TRENCH ON ALL TYPES OF PIPE.

IN GRASS AREAS, COURSE INTERLOCKING AGGREGATE TO WITHIN 3 INCHES OF FINAL GRADE OR AT A MINIMUM 80% OF THE PIPE DIAMETER, WHICHEVER IS GREATER ON ALL TYPES OF PIPE.

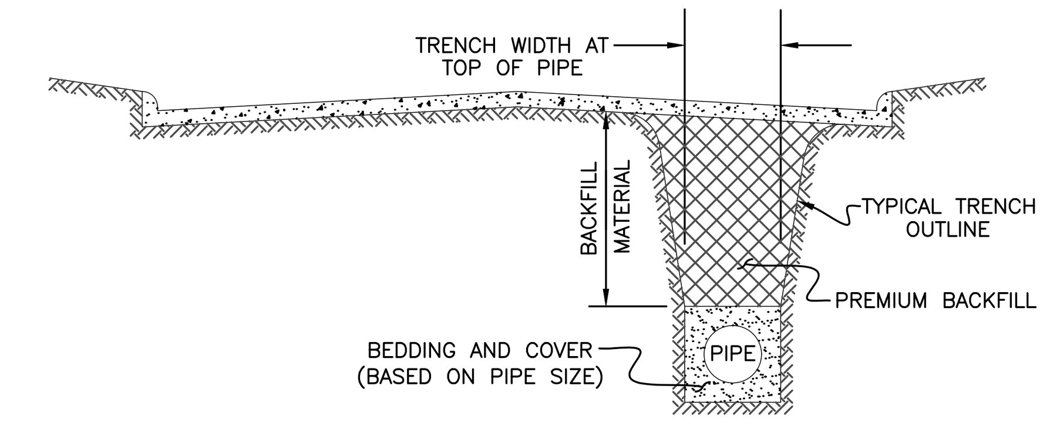
TYPICAL TRENCH DETAILS

NOT TO SCALE

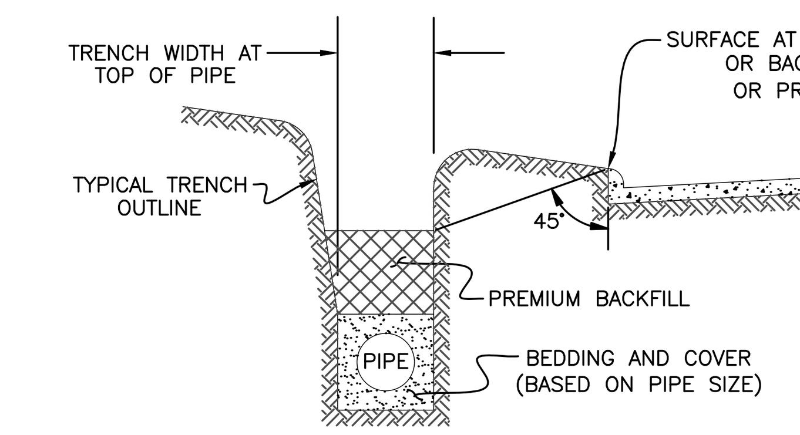
TRENCH BEDDING SHALL CONFORM TO ASTM D 2321, CLASS IA, IB, II OR III.



SECTION: CROSSING PAVEMENT WITHIN MAXIMUM TRENCH WIDTH
(PROPOSED OR FUTURE)



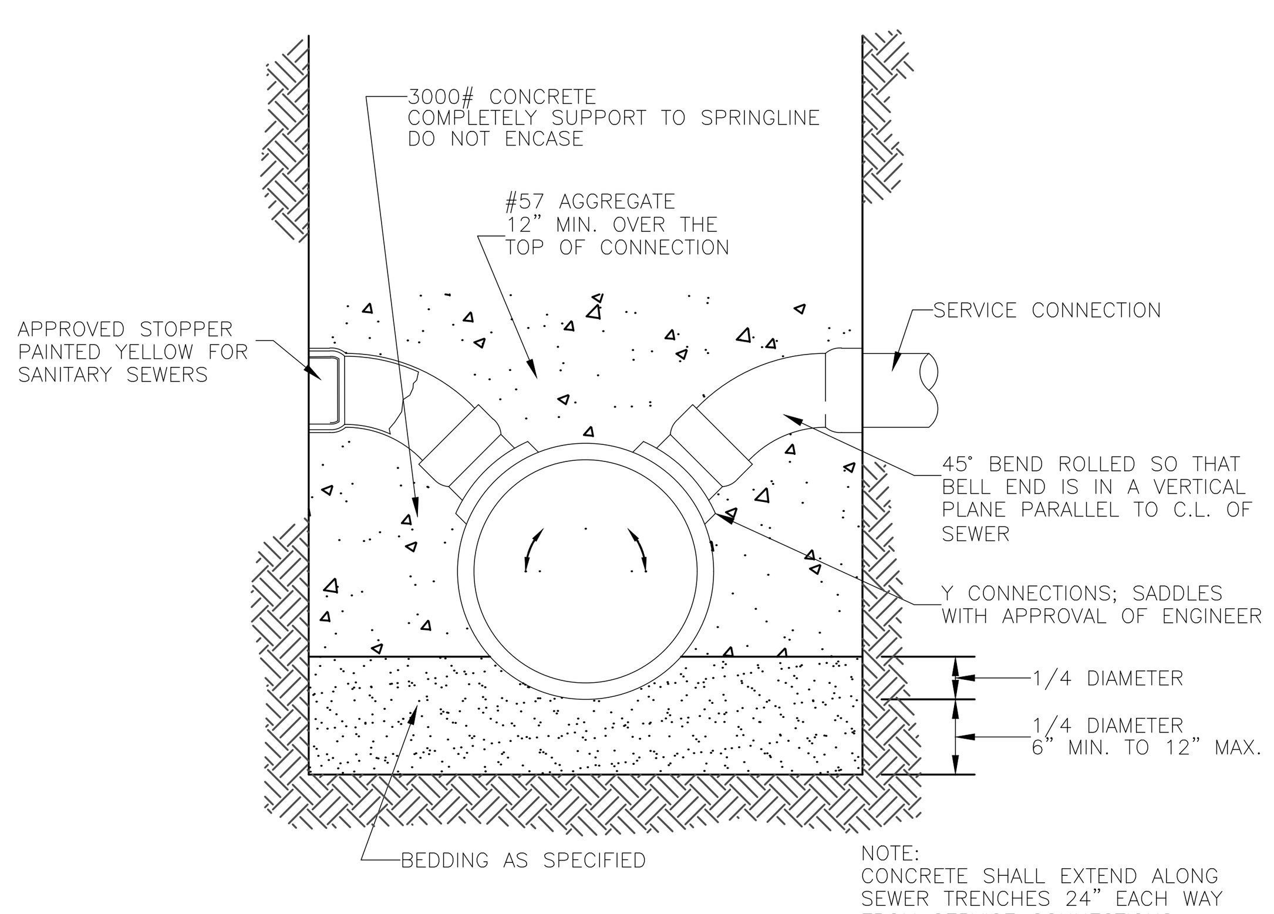
SECTION: ACROSS OR INSIDE PAVEMENT
(PROPOSED OR FUTURE)



SECTION: OUTSIDE PAVEMENT
(PROPOSED OR FUTURE)

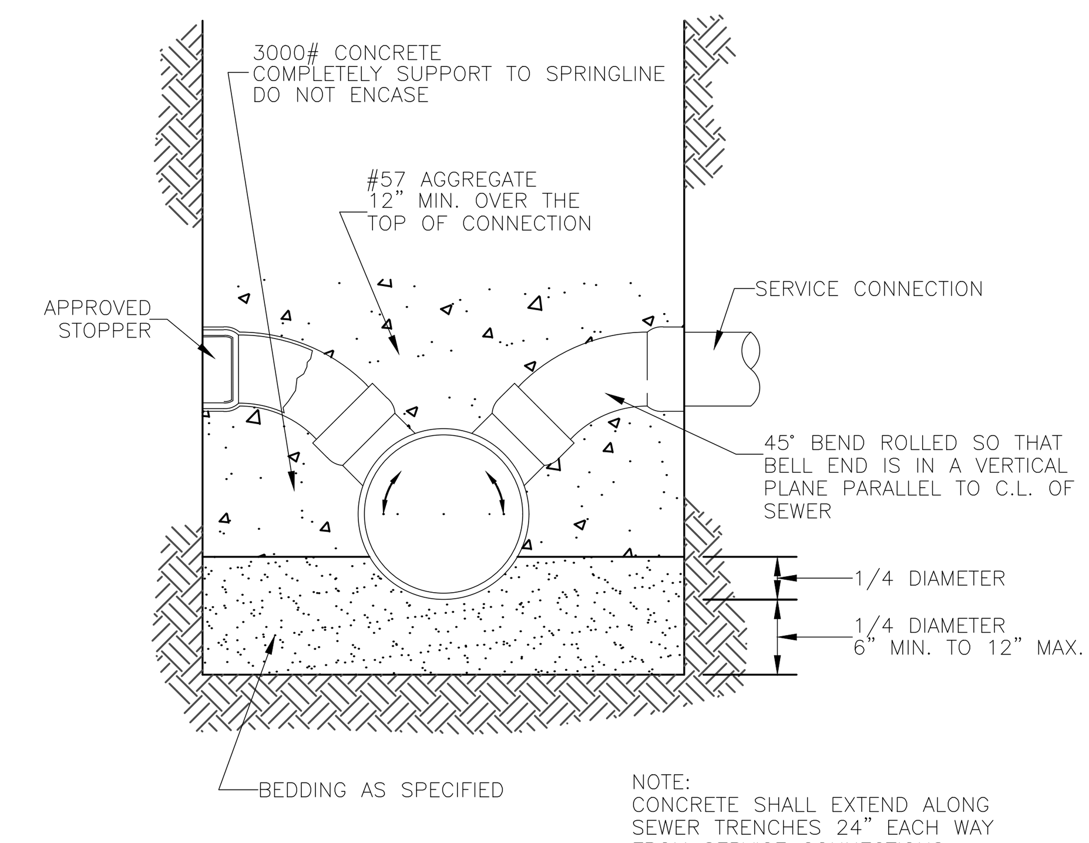
TYPICAL TRENCH SECTIONS

NOT TO SCALE



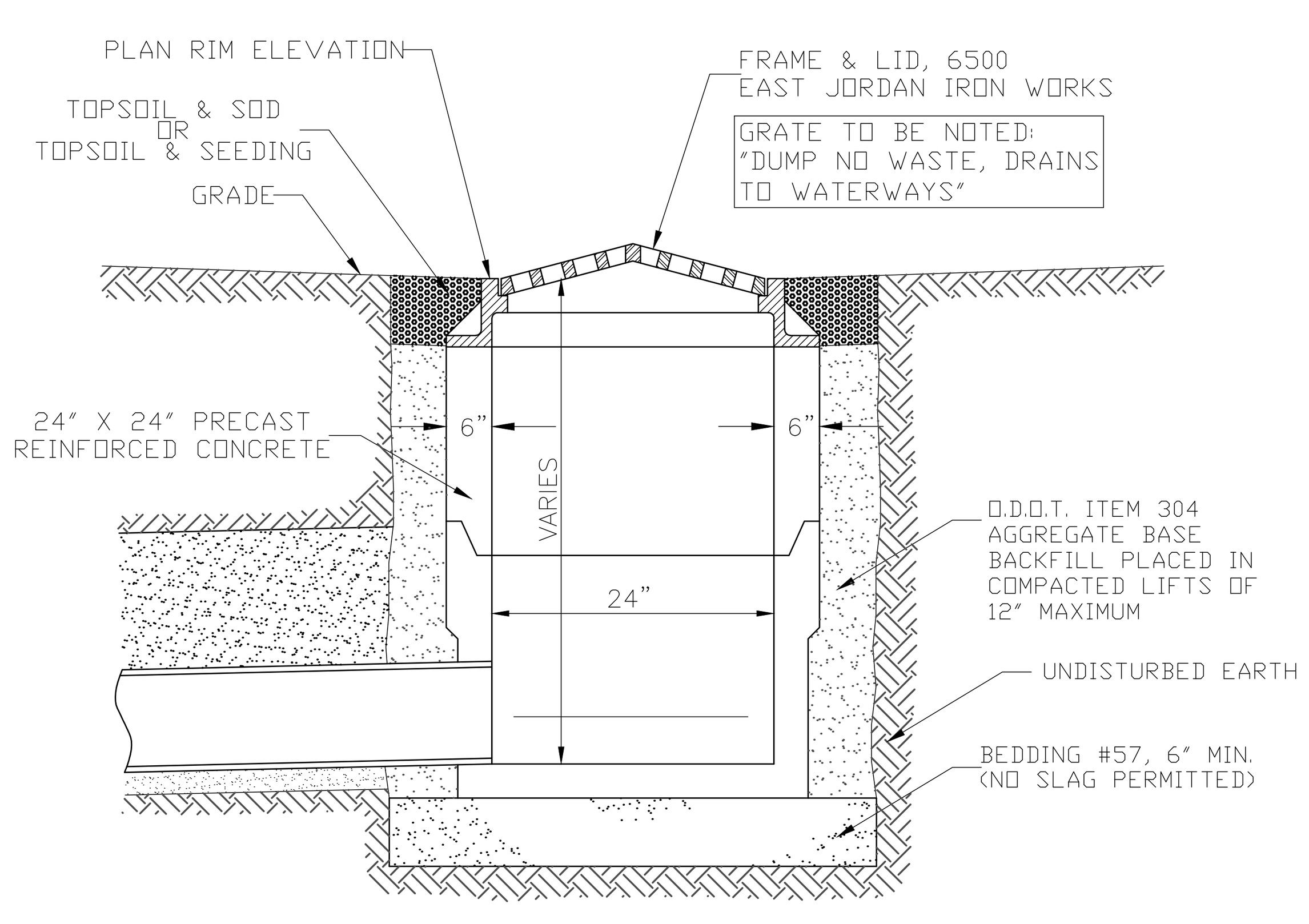
TYPICAL SLANT DETAIL

NOT TO SCALE



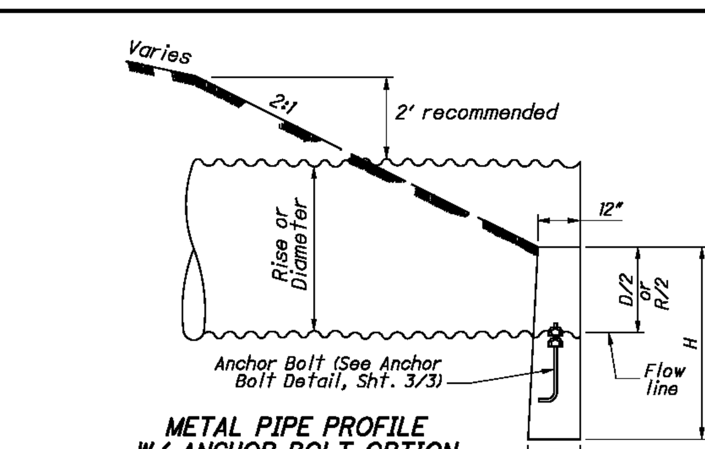
TYPICAL Y-BRANCH DETAIL

NOT TO SCALE

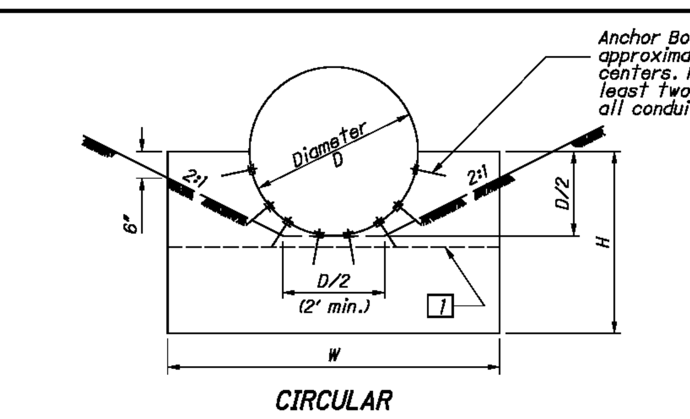


YARD INLET BASIN

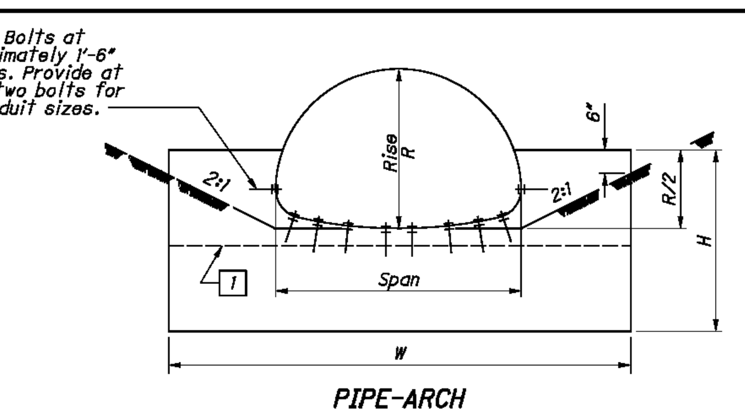
NOT TO SCALE



METAL PIPE PROFILE
W/ ANCHOR BOLT OPTION



CIRCULAR



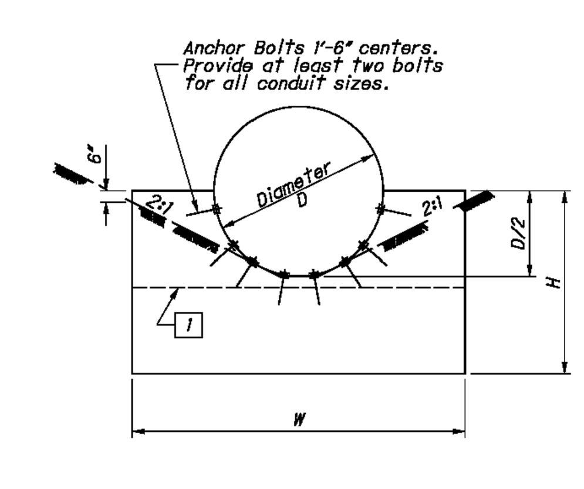
PIPE-ARCH

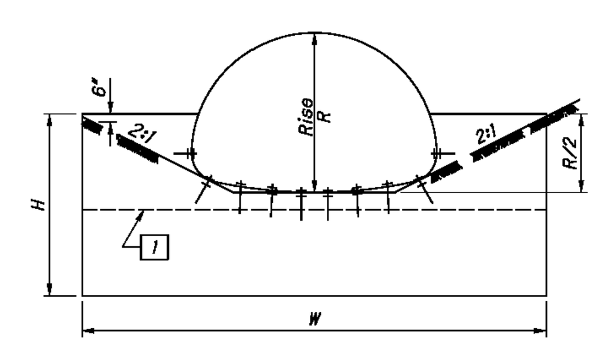
METAL PIPE END TREATMENT "A" W/ ANCHOR BOLT OPTION

CAST-IN-PLACE HW FOR CORRUGATED METAL PIPE & PLASTIC PIPE (English)																
CIRCULAR					PIPE ARCH						PIPE ARCH					
D	W	H	T	CONC. cu. yds.	SPAN	RISE	W	H	T	CONC. cu. yds.	SPAN	RISE	W	H	T	CONC. cu. yds.
12"	2'-0"	3'-0"	12"	0.21	2.67"x½" Corrugations						*81"	59"	12'-4"	5'-5"	15"	2.14
15"	2'-6"	3'-2"	12"	0.27	17"	13"	3'-0"	3'-0"	12"	0.31	87"	63"	13'-0"	5'-7"	17"	2.50
18"	3'-0"	3'-3"	12"	0.33	21"	15"	3'-6"	3'-0"	12"	0.35	95"	67"	14'-0"	5'-9"	20"	3.14
21"	3'-6"	3'-4"	12"	0.39	24"	18"	4'-0"	3'-2"	12"	0.43	103"	71"	15'-0"	5'-11"	22"	3.54
24"	4'-0"	3'-6"	12"	0.46	28"	20"	4'-6"	3'-3"	12"	0.48	112"	75"	16'-0"	6'-1"	24"	3.96
27"	4'-6"	3'-8"	12"	0.53	35"	24"	5'-6"	3'-5"	12"	0.61	117"	79"	17'-9"	6'-3"	25"	4.89
30"	5'-0"	3'-9"	12"	0.60	42"	29"	6'-6"	3'-7"	12"	0.73	128"	83"	18'-0"	6'-5"	26"	5.01
33"	5'-6"	3'-10"	12"	0.68	49"	33"	7'-8"	3'-9"	12"	0.90	137"	87"	19'-0"	6'-7"	27"	5.45
36"	6'-0"	4'-0"	12"	0.76	57"	38"	9'-0"	4'-0"	12"	1.10	142"	91"	20'-9"	6'-9"	27"	6.31
39"	6'-6"	4'-2"	12"	0.84	64"	43"	10'-0"	4'-4"	12"	1.31	6"x2" Corrugations					
42"	7'-0"	4'-3"	12"	0.92	71"	47"	11'-0"	4'-8"	12"	1.54	(18" Corner Radius)					
48"	8'-0"	4'-6"	12"	1.10	*77"	52"	11'-8"	5'-3"	12"	1.84	*6'-1"	4'-7"	11'-8"	5'-7"	12"	1.89
54"	9'-3"	4'-9"	12"	1.33	*83"	57"	12'-4"	5'-5"	15"	2.46	*6'-4"	4'-9"	12'-0"	5'-8"	14"	2.12
60"	10'-6"	5'-6"	12"	1.78	6"x2" Corrugations						*6'-9"	4'-11"	12'-4"	5'-9"	15"	2.42
66"	11'-9"	5'-9"	12"	2.06	(31" Corner Radius)						*7'-0"	5'-1"	12'-8"	5'-10"	16"	2.44
72"	13'-0"	6'-0"	12"	2.37	13'-3"	9'-4"	23'-11"	7'-11"	32"	9.63	7'-3"	5'-3"	12'-11"	5'-11"	17"	2.69
78"	14'-3"	6'-3"	14"	2.94	13'-6"	9'-6"	24'-9"	8'-0"	32"	10.12	7'-8"	5'-5"	13'-2"	6'-0"	18"	2.77
84"	15'-6"	6'-6"	14"	3.30	14'-0"	9'-8"	24'-10"	8'-1"	33"	10.33	7'-11"	5'-7"	14'-0"	6'-1"	20"	3.15
90"	16'-9"	6'-9"	16"	4.00	14'-2"	9'-10"	25'-9"	8'-2"	33"	10.87	8'-2"	5'-9"	14'-8"	6'-2"	21"	3.45
96"	18'-0"	7'-0"	16"	4.40	14'-5"	10'-0"	26'-7"	8'-3"	33"	11.39	8'-7"	5'-11"	15'-0"	6'-3"	22"	3.75
102"	19'-3"	7'-3"	18"	5.28	14'-11"	10'-2"	26'-9"	8'-4"	34"	11.68	8'-10"	6'-1"	15'-10"	6'-4"	23"	4.15
108"	20'-6"	7'-6"	20"	6.21	15'-4"	10'-4"	26'-11"	8'-5"	34"	11.96	9'-4"	6'-3"	16'-0"	6'-5"	24"	4.65
114"	21'-9"	7'-9"	22"	7.25	15'-7"	10'-6"	27'-9"	8'-6"	34"	12.51	9'-6"	6'-5"	16'-10"	6'-6"	26"	4.93
120"	23'-0"	8'-0"	24"	8.38	15'-10"	10'-8"	28'-7"	8'-7"	35"	13.06	9'-9"	6'-7"	17'-9"	6'-7"	27"	5.41
*126"	23'-0"	8'-3"	26"	8.64	16'-3"	10'-10"	28'-8"	8'-8"	35"	13.34	10'-3"	6'-9"	17'-10"	6'-8"	27"	5.45
132"	23'-0"	8'-6"	28"	9.23	16'-6"	11'-0"	29'-7"	8'-9"	35"	13.94	10'-8"	6'-11"	17'-11"	6'-9"	27"	5.59
138"	24'-1"	8'-9"	30"	10.50	17'-0"	11'-2"	29'-8"	8'-10"	36"	14.24	10'-11"	7'-1"	18'-10"	6'-10"	28"	5.97
144"	25'-2"	9'-0"	32"	11.89	17'-2"	11'-4"	30'-7"	8'-11"	36"	14.84	11'-5"	7'-3"	18'-11"	6'-11"	28"	6.12
150"	26'-4"	9'-3"	34"	13.38	17'-5"	11'-6"	31'-5"	9'-0"	36"	15.42	11'-7"	7'-5"	19'-9"	7'-0"	28"	6.52
156"	27'-5"	9'-6"	36"	15.01	17'-11"	11'-8"	31'-7"	9'-1"	37"	15.83	11'-10"	7'-7"	20'-9"	7'-1"	29"	6.94
162"	28'-7"	9'-9"	38"	16.75	18'-1"	11'-10"	32'-5"	9'-2"	37"	16.43	12'-4"	7'-9"	20'-10"	7'-2"	29"	7.12
168"	29'-8"	10'-0"	40"	18.61	18'-7"	12'-0"	32'-6"	9'-3"	37"	16.78	12'-6"	7'-11"	21'-8"	7'-3"	29"	7.53
174"	30'-9"	10'-3"	42"	20.28	18'-9"	12'-2"	33'-4"	9'-4"	38"	17.43	12'-8"	8'-1"	22'-7"	7'-4"	30"	7.95
180"	31'-11"	10'-6"	43"	21.87	19'-3"	12'-4"	33'-5"	9'-5"	38"	17.78	12'-10"	8'-4"	23'-7"	7'-5"	30"	8.48
186"	33'-0"	10'-9"	44"	23.54	19'-6"	12'-6"	34'-5"	9'-6"	38"	18.49	13'-5"	8'-5"	23'-7"	7'-6"	30"	8.63
192"	34'-2"	11'-0"	45"	25.30	19'-8"	12'-8"	35'-3"	9'-7"	39"	19.19	13'-11"	8'-7"	23'-7"	7'-7"	31"	8.81
198"	35'-3"	11'-3"	46"	27.12	19'-11"	12'-10"	36'-3"	9'-8"	39"	19.95	14'-1"	8'-9"	25'-1"	7'-8"	31"	9.29
204"	36'-4"	11'-6"	47"	29.15	20'-5"	13'-0"	36'-3"	9'-9"	39"	20.30	14'-3"	8'-11"	25'-6"	7'-9"	31"	9.78
210"	37'-6"	11'-9"	48"	31.03	20'-7"	13'-2"	37'-2"	9'-10"	40"	21.05	14'-10"	9'-1"	25'-6"	7'-10"	32"	10.25
216"	38'-7"	12'-0"	49"	33.43	3"x1" Corrugations						15'-4"	9'-3"	25'-6"	7'-11"	32"	10.25
222"	39'-9"	12'-3"	50"	36.26	40"	31"	6'-6"	3'-7"	12"	0.70	15'-6"	9'-5"	26'-5"	8'-0"	32"	10.74
228"	40'-10"	12'-6"	51"	37.52	46"	36"	7'-8"	3'-9"	12"	0.85	15'-8"	9'-7"	27'-5"	8'-1"	33"	11.28
234"	42'-0"	12'-9"	52"	39.86	53"	41"	9'-0"	4'-0"	12"	1.06	15'-10"	9'-10"	28'-5"	8'-2"	33"	12.00
240"	43'-1"	13'-0"	53"	42.28	60"	46"	10'-0"	4'-4"	12"	1.27	16'-5"	9'-11"	28'-5"	8'-3"	33"	12.09
246"	44'-2"	13'-3"	54"	44.83	66"	51"	11'-0"	4'-8"	12"	1.54	16'-7"	10'-1"	29'-4"	8'-4"	34"	12.64
252"	45'-4"	13'-6"	55"	47.44	*73"	55"	11'-8"	5'-3"	12"	1.81	--	--	--	--	--	--

* Determine channel configuration for pipe sizes between end treatment "A" and end treatment "B" by 2:1 slopes passing through a point 6" below the top and at each side of the headwall. For end treatment "B", 2:1 slopes are tangent to pipe.

[1] Top surface of 6" inlet headwall extension





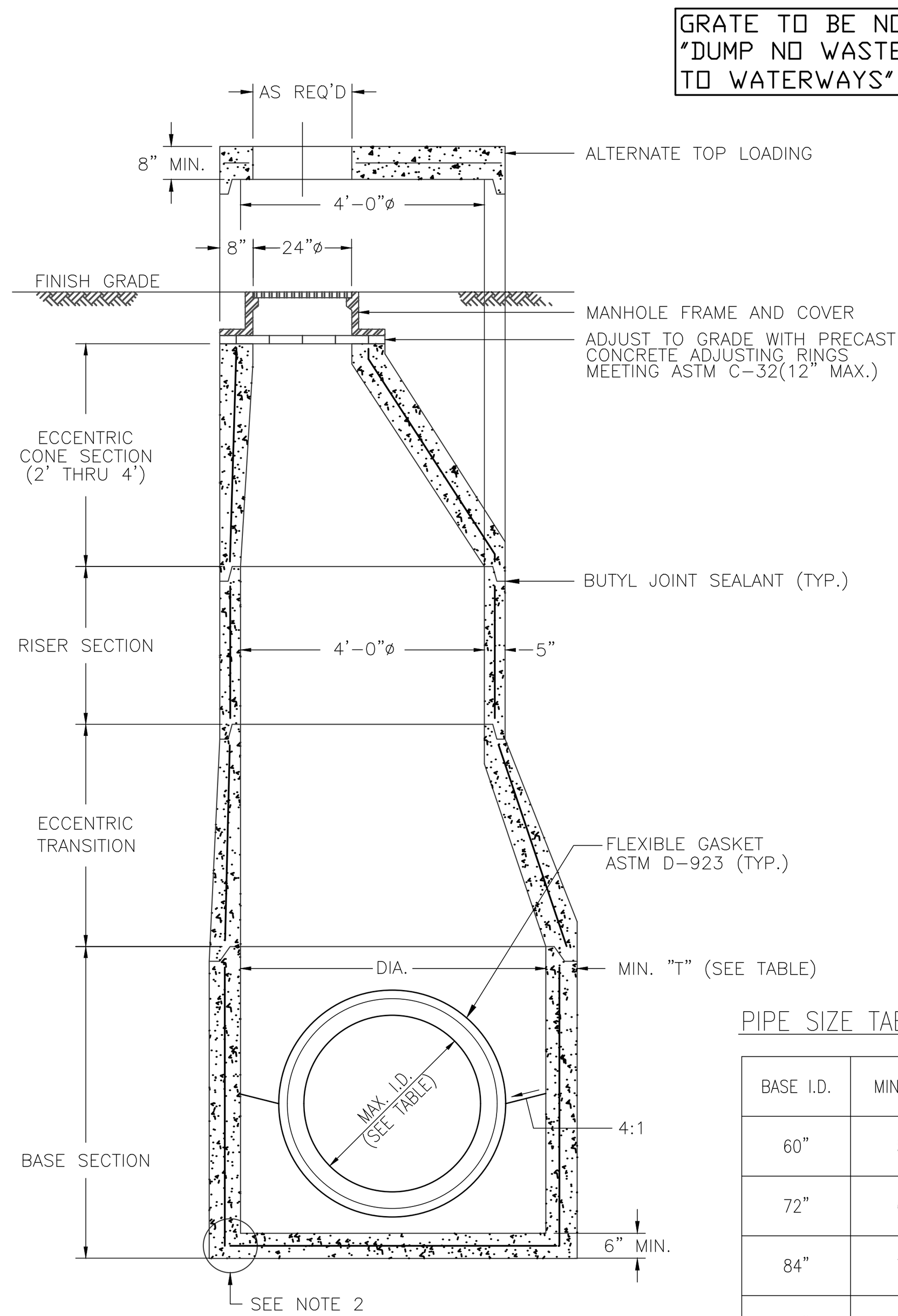
METAL PIPE END TREATMENT "B"
W/ ANCHOR BOLT OPTION

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF HYDRAULIC ENGINEERING
HALF-HEIGHT HEADWALLS FOR CORRUGATED METAL PIPE AND PLASTIC PIPE
HW 2.1
1/4

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

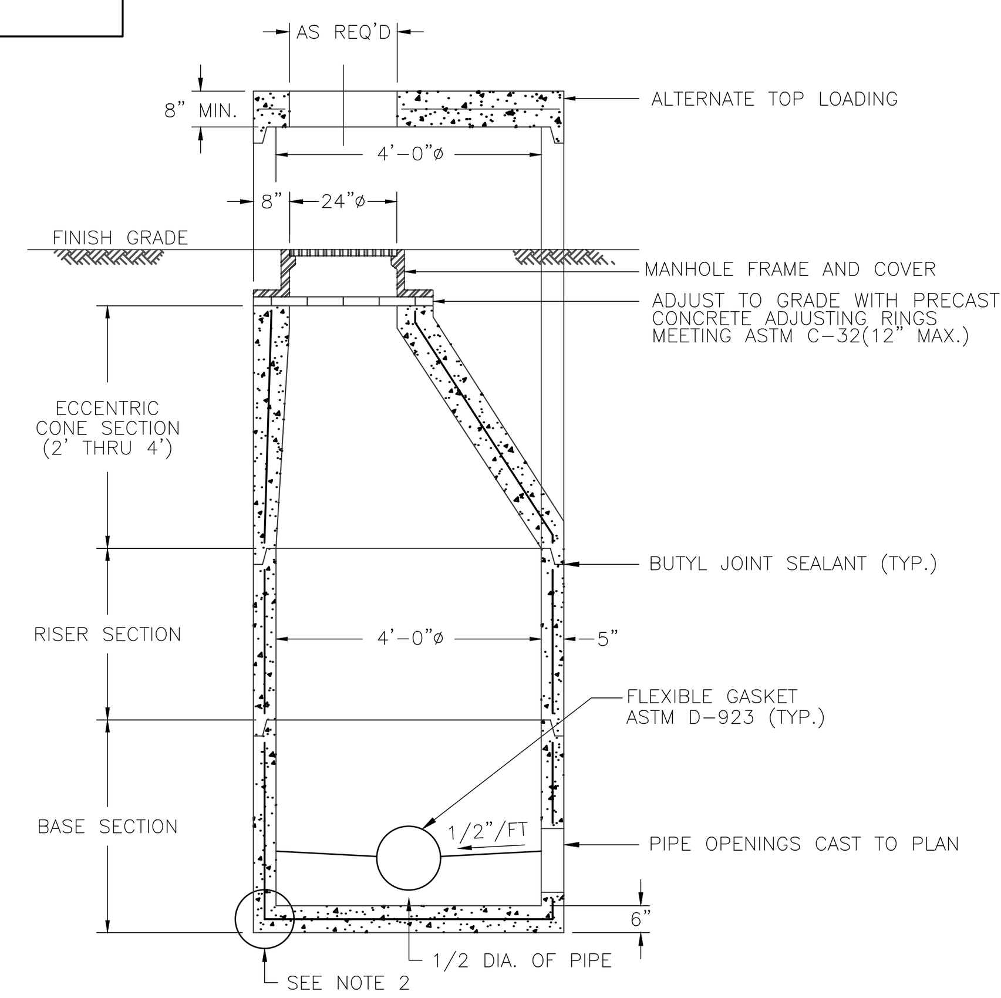
HUNTINGTON PARK PHASE 4
STORM & SANITARY NOTES & DETAILS

PROJECT NUMBER	1966
DATE	2021-09-02



60" TO 96" PRECAST BASE

SEE TABLE FOR MAX. PIPE SIZES



48" PRECAST BASE

PIPE SIZE TABLE

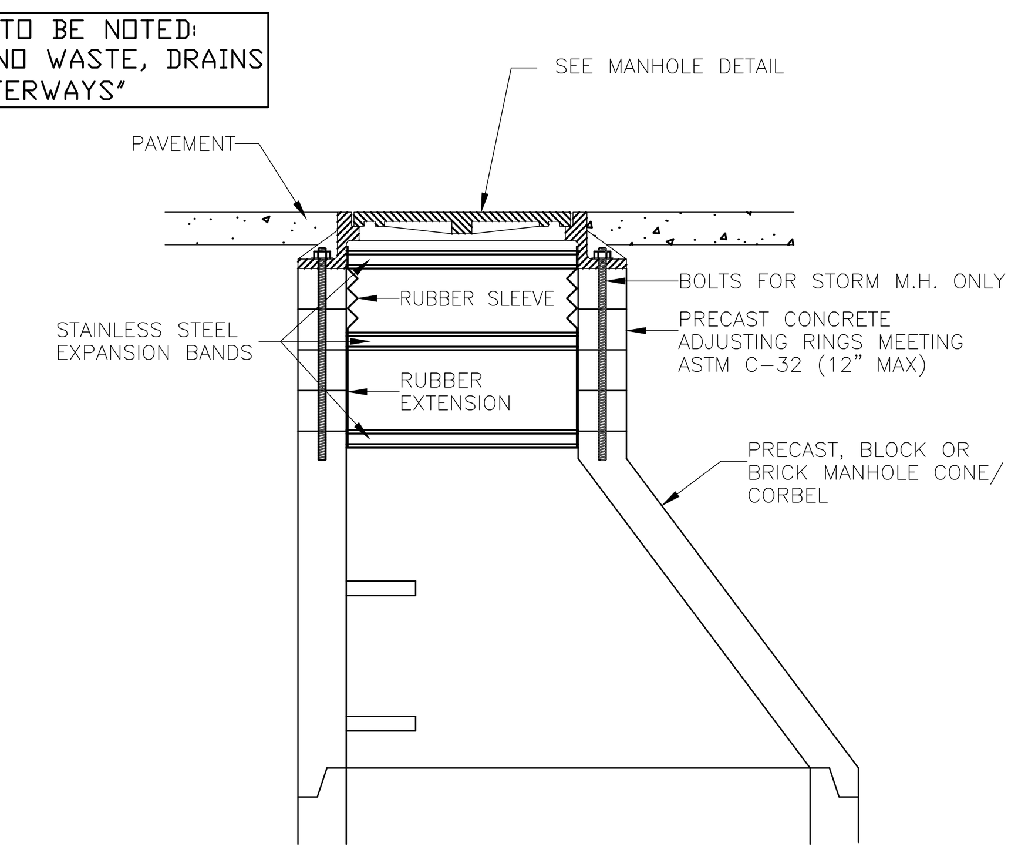
BASE I.D.	MIN. "T"	MAX. PIPE SIZE
60"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7-1/2"	60"
96"	8"	60"

GENERAL NOTES:

1. ALL REINFORCING STEEL MUST CONFORM TO THE LATEST ASTM A185 AND/OR A615 GRADE 60, SPECIFICATION 0.12 SQ. IN/LINEAL FT.
2. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MIN. OF 0.12 SQ. IN/LINEAR FT.(BOTH WAYS)
3. MANHOLE SPECS. CONFORM TO THE LATEST ASTM C478 SPEC. FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS". ALL PORTLAND CEMENT CONCRETE SHALL BE CLASS 3000 PSI, 3/4" AGGREGATE, TYPE II.
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS, CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. ALTERNATE SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING.
7. MANHOLE FRAME AND COVER
   STORM MANHOLE – EAST JORDAN IRON WORKS No. 1710A (VENTED) OR APPROVED EQUAL.
   SANITARY MANHOLE – EAST JORDAN IRON WORKS No. 1710B (SOLID) OR APPROVED EQUAL.
8. ALL MANHOLE SECTION JOINTS SHALL CONFORM TO ASTM C443
9. ALL MANHOLES SHALL HAVE STEPS INSTALLED INTERNALLY IN ACCORDANCE WITH THE LATEST OSHA REQUIREMENTS.

PRECAST CONCRETE MANHOLE DETAILS

NOT TO SCALE

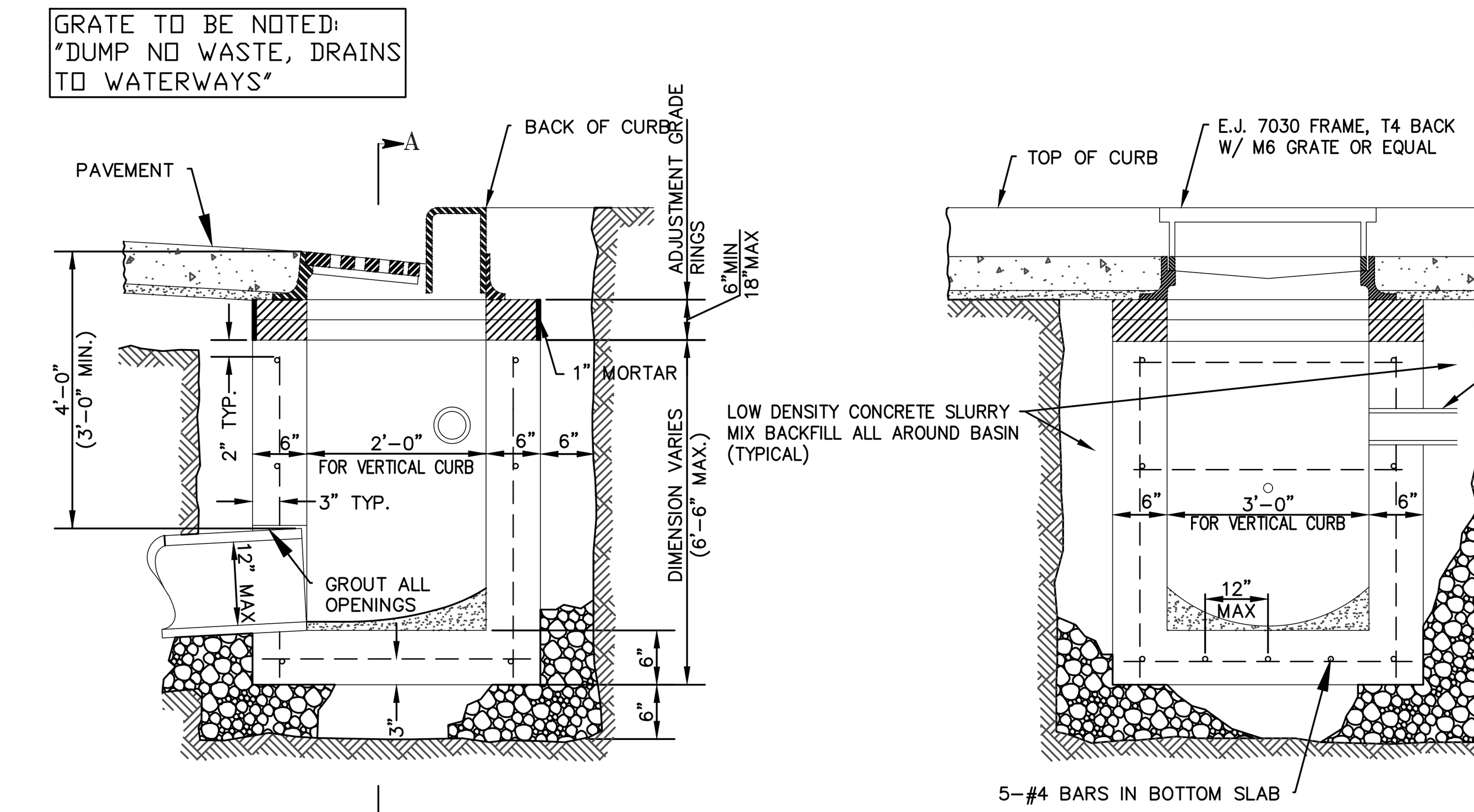


TO SPAN CHIMNEY HEIGHTS OF:

0 TO 4-1/2"	–	CHIMNEY SEAL ONLY
OVER 4-1/2" TO 9"	–	SEAL + 7" EXTENSION
OVER 9" TO 12"	–	SEAL + 10" EXTENSION
OVER 12"	–	SEAL + MULT. EXTENSION

SANITARY SEWER INTERNAL MANHOLE CHIMNEY SEAL

NOT TO SCALE



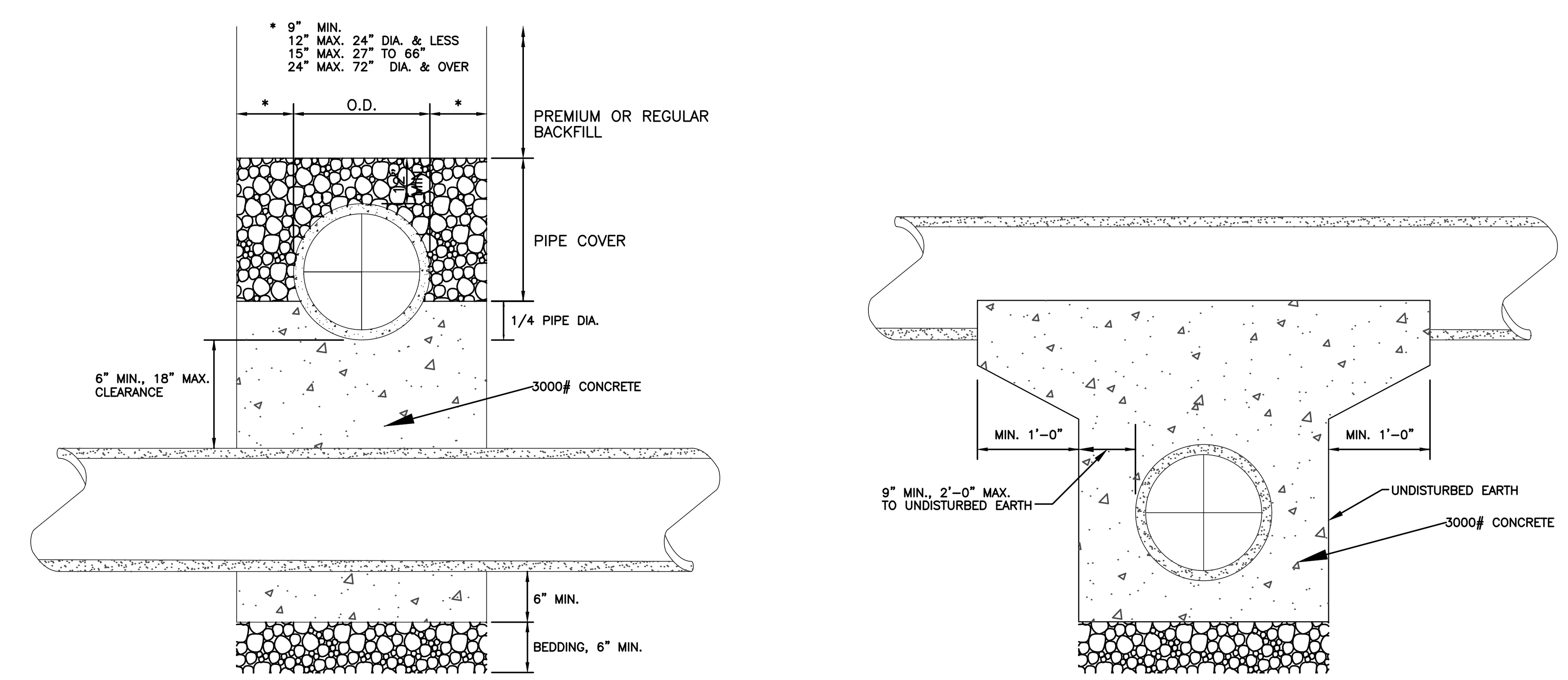
SECTION A-A

NOTES:

1. ALL REINFORCING SHALL BE #4 DEFORMED BARS.
2. CONCRETE SHALL BE ODOT CLASS "C", 4000 PSI IN 28 DAYS.
3. GRATES SHALL BE BICYCLE & PEDESTRIAN SAFE.
4. CASTING: EAST JORDAN 7030 OR EQUAL. USE FULL 8" GUTTER TO TOP OF CURB DIMENSION. GUTTER TO BE DEPRESSED 2" AT ALL CATCH BASINS AND INLET BASIN BASINS.

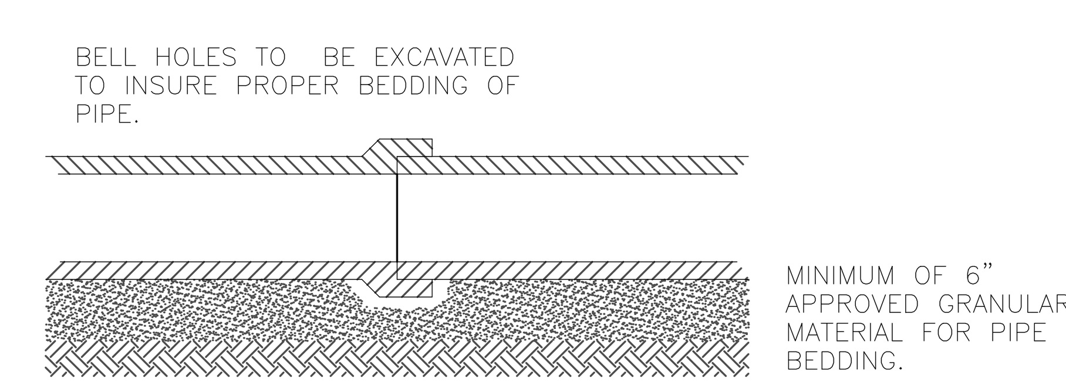
RECTANGULAR PRECAST CONCRETE INLET BASIN

(BARRIER CURBS)
NOT TO SCALE



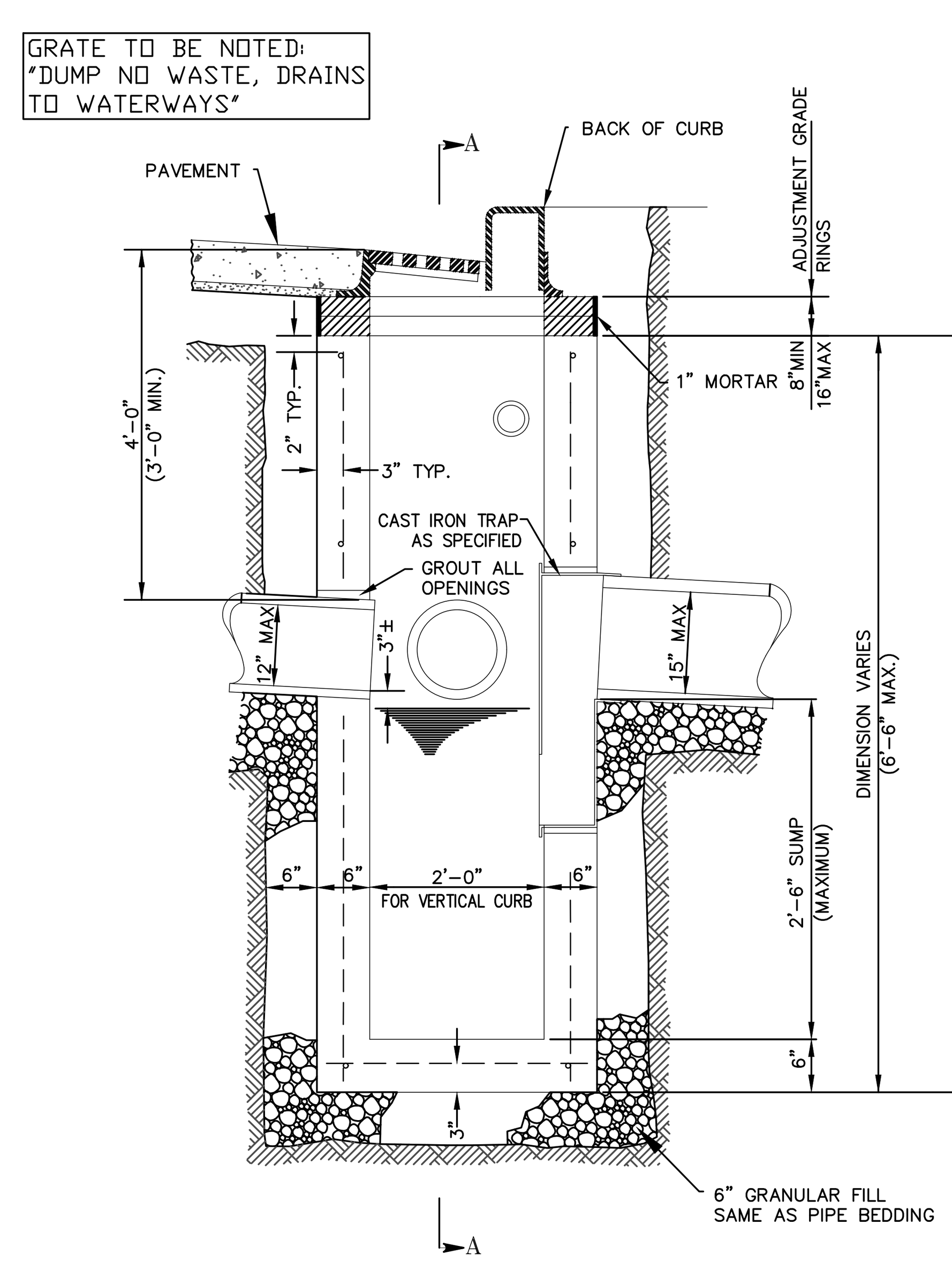
CONCRETE ENCASEMENT MONOLITHIC CRADLING OF UPPER PIPE

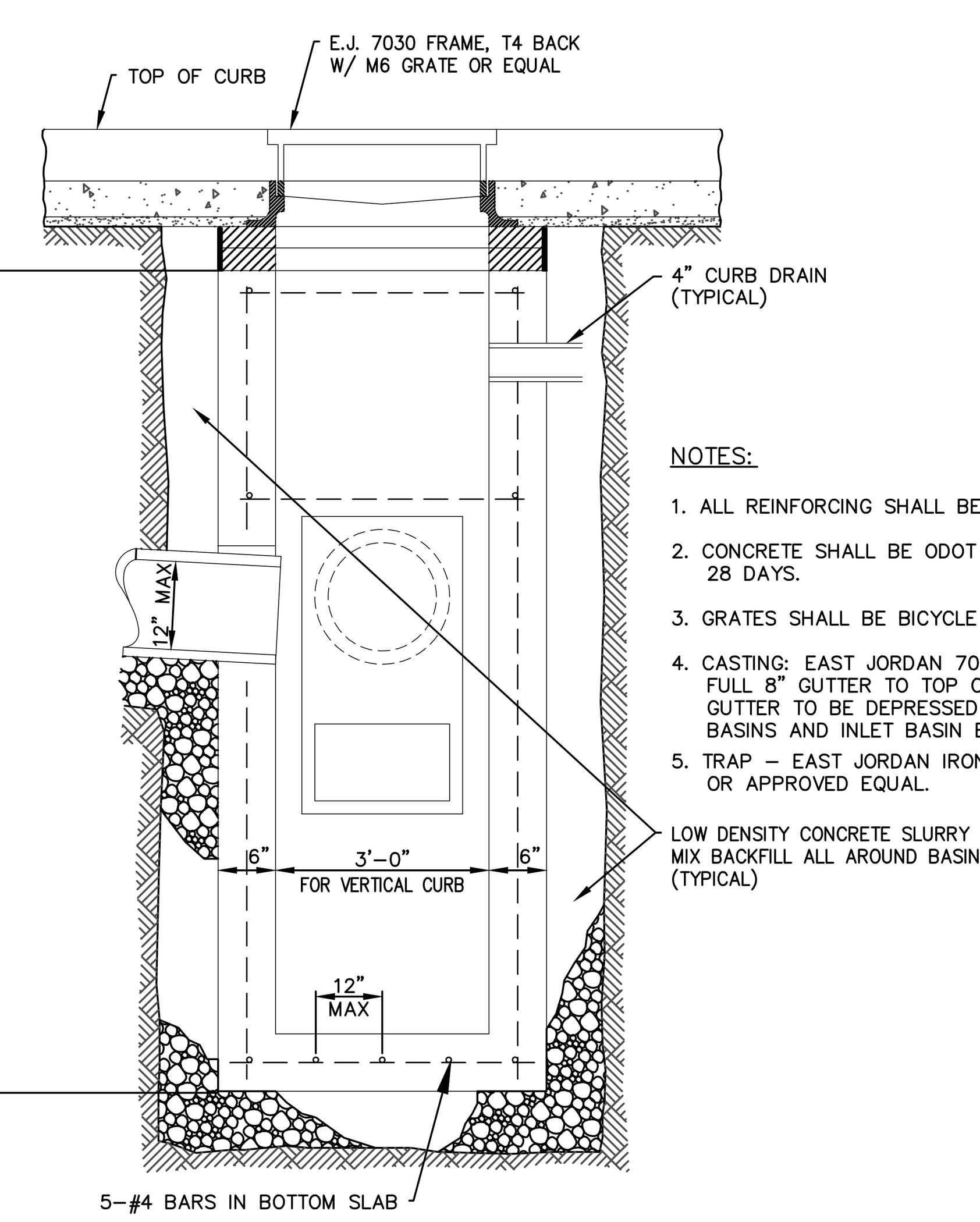
NOT TO SCALE



BELL HOLES

NOT TO SCALE





SECTION A-A

NOTES:

1. ALL REINFORCING SHALL BE #4 DEFORMED BARS.
2. CONCRETE SHALL BE ODOT CLASS "C", 4000 PSI IN 28 DAYS.
3. GRATES SHALL BE BICYCLE & PEDESTRIAN SAFE.
4. CASTING: EAST JORDAN 7030 OR EQUAL. USE FULL 8" GUTTER TO TOP OF CURB DIMENSION. GUTTER TO BE DEPRESSED 2" AT ALL CATCH BASINS AND INLET BASIN BASINS.
5. TRAP – EAST JORDAN IRON WORKS NO. 5964 OR APPROVED EQUAL.

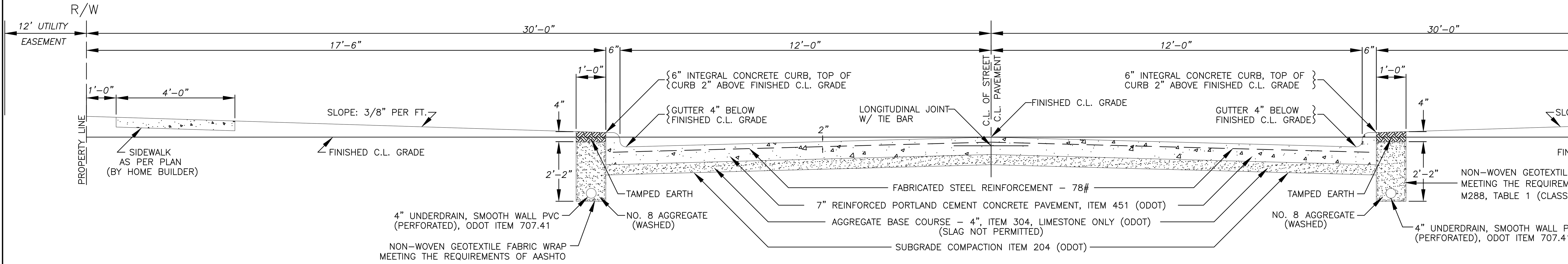
RECTANGULAR PRECAST CONCRETE CATCH BASIN

(BARRIER CURBS)

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

HUNTINGTON PARK PHASE 4
STORM & SANITARY NOTES & DETAILS

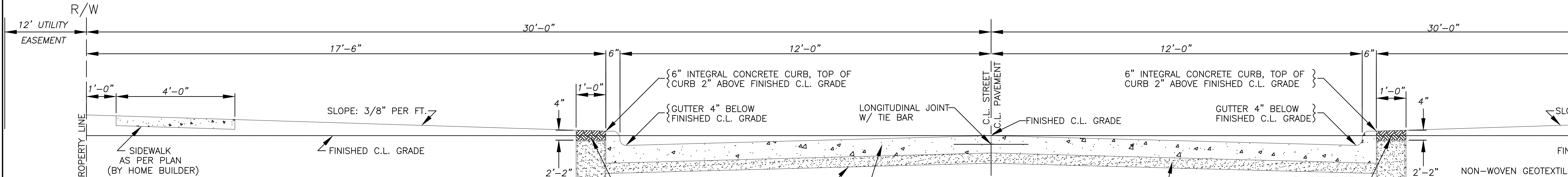
PROJECT NUMBER	1966
DATE	2021-09-02



TYPICAL PAVEMENT SECTION

NOT TO SCALE

NOTES:
- ALL STEEL IS EPOXY COATED EXCEPT FABRICATED STEEL REINFORCEMENT – 78#.
- APPROVED SODIUM SILICATE SEALER TO BE APPLIED TO PAVEMENT PER MANUFACTURERS SPECIFICATIONS 30 DAYS AFTER CURE. APPROVED PRODUCTS ARE:
  - SINAK SEALER S-102
  - CHEM-TRETE BSM 40 VOC
  - OR APPROVED EQUAL



ALTERNATE: TYPICAL NON-REINFORCED PAVEMENT SECTION

NOT TO SCALE

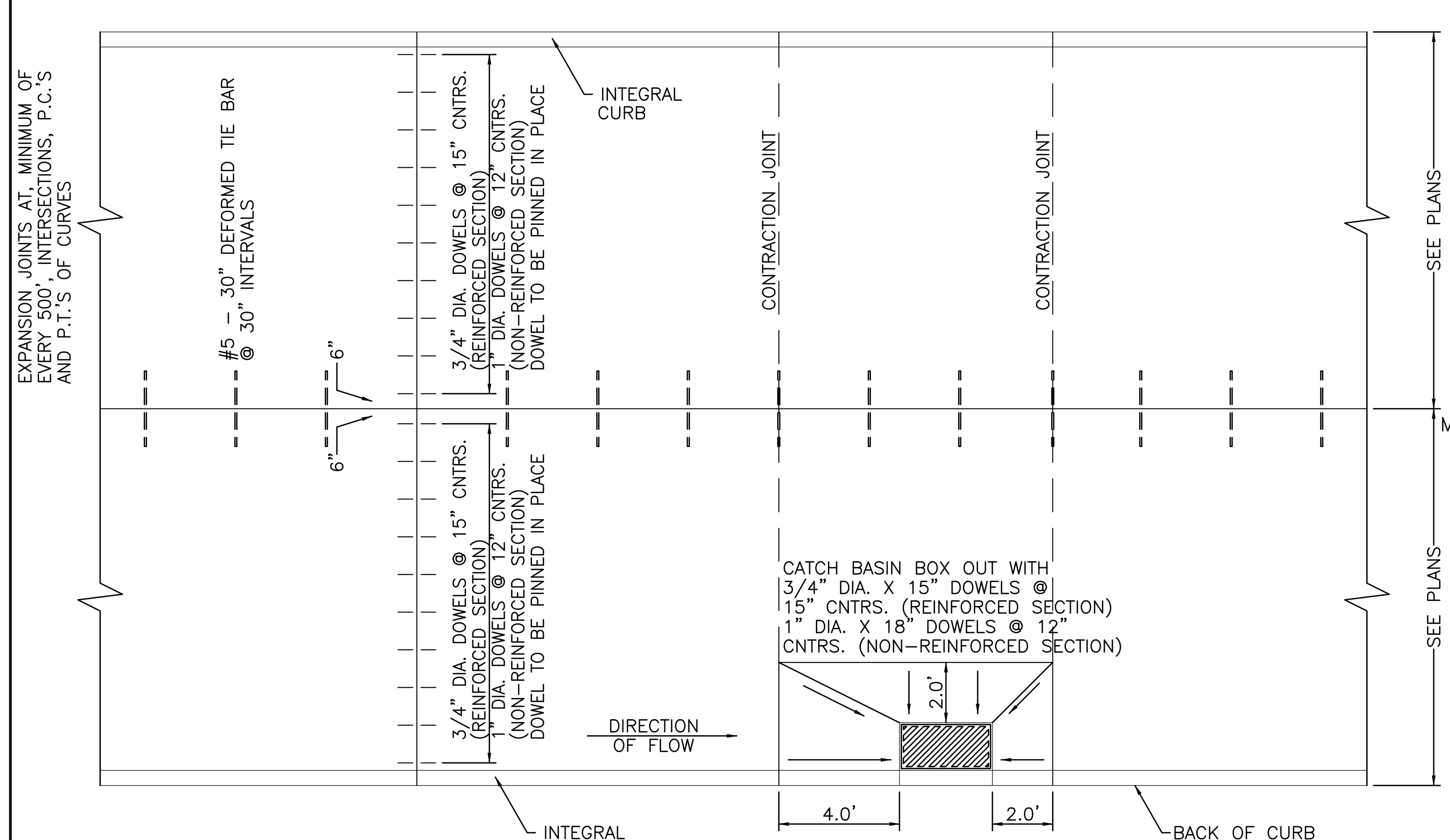
NOTES:
- ALL STEEL IS EPOXY COATED EXCEPT REBAR WITHIN SLEEPER SLAB.
- APPROVED SODIUM SILICATE SEALER TO BE APPLIED TO PAVEMENT PER MANUFACTURERS SPECIFICATIONS 30 DAYS AFTER CURE. APPROVED PRODUCTS ARE:
  - SINAK SEALER S-102
  - CHEM-TRETE BSM 40 VOC
  - OR APPROVED EQUAL

CONCRETE PAVEMENT NOTES (APPLIES TO EITHER SECTION):

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMS) AS WELL AS THE CODIFIED ORDINANCES OF NORTH ROYALTON, OHIO. IF THERE IS A DISCREPANCY BETWEEN THE TWO, THEN THE STRICTEST REQUIREMENT SHALL TAKE PRECEDENT. THE CITY ENGINEER OF NORTH ROYALTON SHALL MAKE THE FINAL RULING.

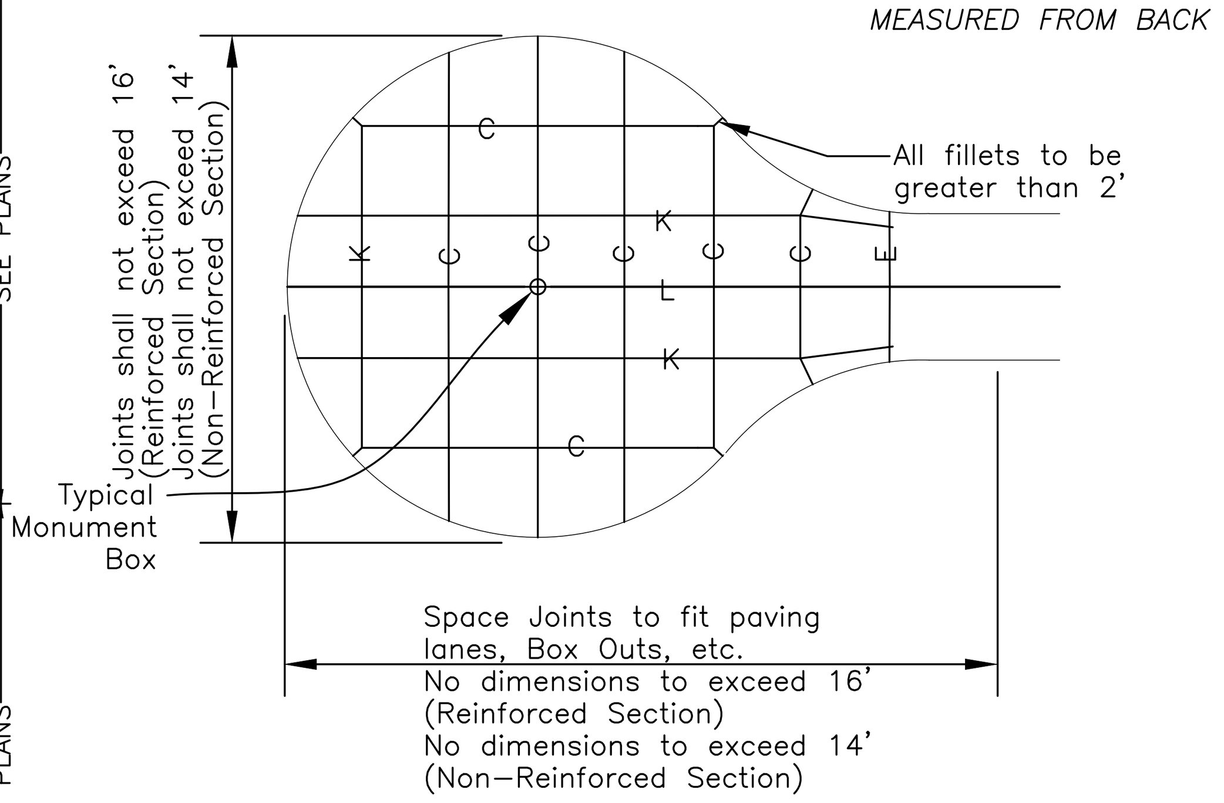
A COPY OF CONCRETE MIX DESIGNS MUST BE SUBMITTED FOR APPROVAL TO THE CITY ENGINEER FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY CONCRETE INSTALLATION. THE CONCRETE MIX DESIGNS SUBMITTED FOR APPROVAL MUST INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: SLEEPER SLAB CONCRETE, SLIP FORM PAVER CONCRETE, AND ANY HANDWORK CONCRETE.

1. *ALL WORK TO BE PERFORMED UNDER FULL TIME INSPECTION BY THE CITY OF NORTH ROYALTON OR ITS DESIGNATED REPRESENTATIVE.*
2. *OPENING OF PAVEMENT TO TRAFFIC TO BE DETERMINED BY 600 P.S.I. BEAM TEST (FOR EARLY OPENING DUE TO ADDITIONAL CONSTRUCTION TRAFFIC) AND 4,000 P.S.I. CYLINDER TEST (7 DAY AND 28 DAY BREAKS) FOR ALL OTHER TRAFFIC.*
3. *AIR ENTRAINMENT SHALL BE 5.5% TO 8%, (INCREASED FROM THE ODOT 6% +/- 2%).*
4. *THE TESTING OF CONCRETE SLUMP, AIR ENTRAINMENT AND TEMPERATURE IS TO BE EXECUTED ON THREE OF THE FIRST SIX TRUCKS TO ESTABLISH THAT THE CONCRETE IS WITHIN THE REQUIRED SPECIFICATIONS. THEREAFTER, RANDOM SLUMP, AIR AND TEMPERATURE TESTING WILL BE EXECUTED TO CONFIRM CONTINUAL COMPLIANCE OF THE SPECIFICATIONS.*
5. *CONCRETE BATCH PLANT TICKETS SHALL CONFORM TO ODOT CMS 499.08, EXCEPT THAT ONLY COMPUTER GENERATED TICKETS FROM COMPUTERIZED BATCH OPERATIONS PLANTS SHALL BE PERMITTED.*
6. *FOUR (4) SAMPLE CYLINDERS ARE TO BE CAST FOR EACH TWENTY-FIVE CUBIC YARDS (25 CY) OF CONCRETE INSTALLED, (TWO-7 DAY BREAKS AND TWO -28 DAY BREAKS)*
7. *AT ALL INTERSECTIONS AND APRON AREAS, A BEAM WILL BE CAST IN ADDITION TO THE CYLINDERS AND IN ADDITION TO ANY BEAMS THAT PLAN TO BE CAST BY THE CONTRACTOR.*
8. *THERE IS TO BE NO WATER ADDED ON-SITE TO THE CONCRETE. ONE PERSON, THE PAVING COMPANY'S AUTHORITY ON SITE, IN THE PRESENCE OF THE CITY'S OBSERVER MAY DIRECT WATER TO BE ADDED AND MIXED, IF DETERMINED NECESSARY (NOT TO EXCEED MAXIMUM WATER-CEMENT RATION AND SLUMP). THIS WILL BE NOTED IN THE INSPECTION REPORT AND ADDITIONAL TESTING MAY BE PERFORMED ON THE WATER ADDED TRUCK.*
9. *IF A CONCRETE TRUCK ARRIVES OR BECOMES 'OUT OF SPEC' (FOR WHATEVER REASON), AND WOULD REQUIRE REJECTION, THE CITY OF NORTH ROYALTON WILL DIRECT. IF THE CITY ENGINEERING OFFICE IS CLOSED OR IS UNAVAILABLE, IT WILL BE THE INSPECTION REPRESENTATIVE'S DECISION TO REJECT, AFTER ALL EFFORTS HAVE BEEN ATTEMPTED TO BRING THE CONCRETE WITHIN SPECIFICATIONS.*
10. *ALL CONCRETE TRUCKS ARE REQUIRED TO 'WASH-OUT' IN THE APPROVED CONCRETE WASH-OUT PIT. SEE SWPPP FOR DETAILS.*
11. *SUBGRADE TO BE COMPACTED AND TESTED TO 98% TO 100% OF DRY DENSITY PROCTOR. MOISTURE CONTENT TO BE OPTIMUM +/- 2.*
12. *PROOF ROLL TO TEST STABILITY AND UNIFORMITY OF THE SUBGRADE COMPACTION IN ACCORDANCE WITH ODOT 204.06.*
13. *ALL SOFT AND YIELDING MATERIAL AND OTHER PORTIONS OF THE SUBGRADE WHICH WILL NOT COMPACT READILY WHEN ROLLED OR TAMPED SHALL BE REMOVED AS DIRECTED BY THE CITY ENGINEER AND REPLACED WITH SUITABLE MATERIAL PLACED, COMPACTED AND RETESTED.*
14. *BASE MATERIAL SHALL BE COMPACTED PER ODOT ITEM 304-AGGREGATE BASE.*
15. *SAWED OR HAND FORMED JOINTS TO BE SEALED WITH ODOT ITEM HOT APPLIED JOINT SEALER.*
16. *REFER TO DETAILS AT STRUCTURES. GENERALLY, WHEN A JOINT FALLS WITHIN FIVE (5) FEET OF BASINS, MANHOLES OR OTHER STRUCTURES, SHORTEN ONE OR MORE SLABS EITHER SIDE OF OPENING TO PERMIT THE JOINT TO FALL ON ROUND STRUCTURES AND AT OR BETWEEN CORNERS OF RECTANGULAR STRUCTURES.*
17. *MONUMENT BOXES TO BE CORED INTO PAVEMENT AND BE INSTALLED PER THE MONUMENT BOX DETAIL.*
18. *WHEN THE ALTERNATE TYPICAL NON-REINFORCED PAVEMENT SECTION IS UTILIZED, 1" EPOXY COATED DOWEL BASKETS ARE TO BE PLACED AND PINNED AT A MAXIMUM 14' JOINT SPACING FOR LOAD TRANSFER.*
19. *IF SOIL CEMENT STABILIZATION IS TO BE USED ON THE PROJECT, IT SHALL BE PERFORMED PER ODOT ITEM 206 AND THE REQUIRED AGGREGATE BASE COURSE THICKNESS MAY BE DECREASED TO 3-INCHES OF ODOT ITEM 304.*
20. *ALL DIMENSIONS ON THIS STANDARD DETAIL SHEET ARE FOR RESIDENTIAL PAVEMENT. REVISIONS WILL BE REQUIRED FOR INDUSTRIAL PAVEMENT. EXAMPLES: 29' PAVEMENT WIDTH MEASURED FROM BACK OF CURB TO BACK OF CURB; 9" CONCRETE PAVEMENT THICKNESS; 1-¼" DIA. DOWEL BASKETS; 70' RIGHT OF WAY WIDTH.*



TYPICAL JOINT ARRANGEMENT FOR ROADWAYS

NOT TO SCALE



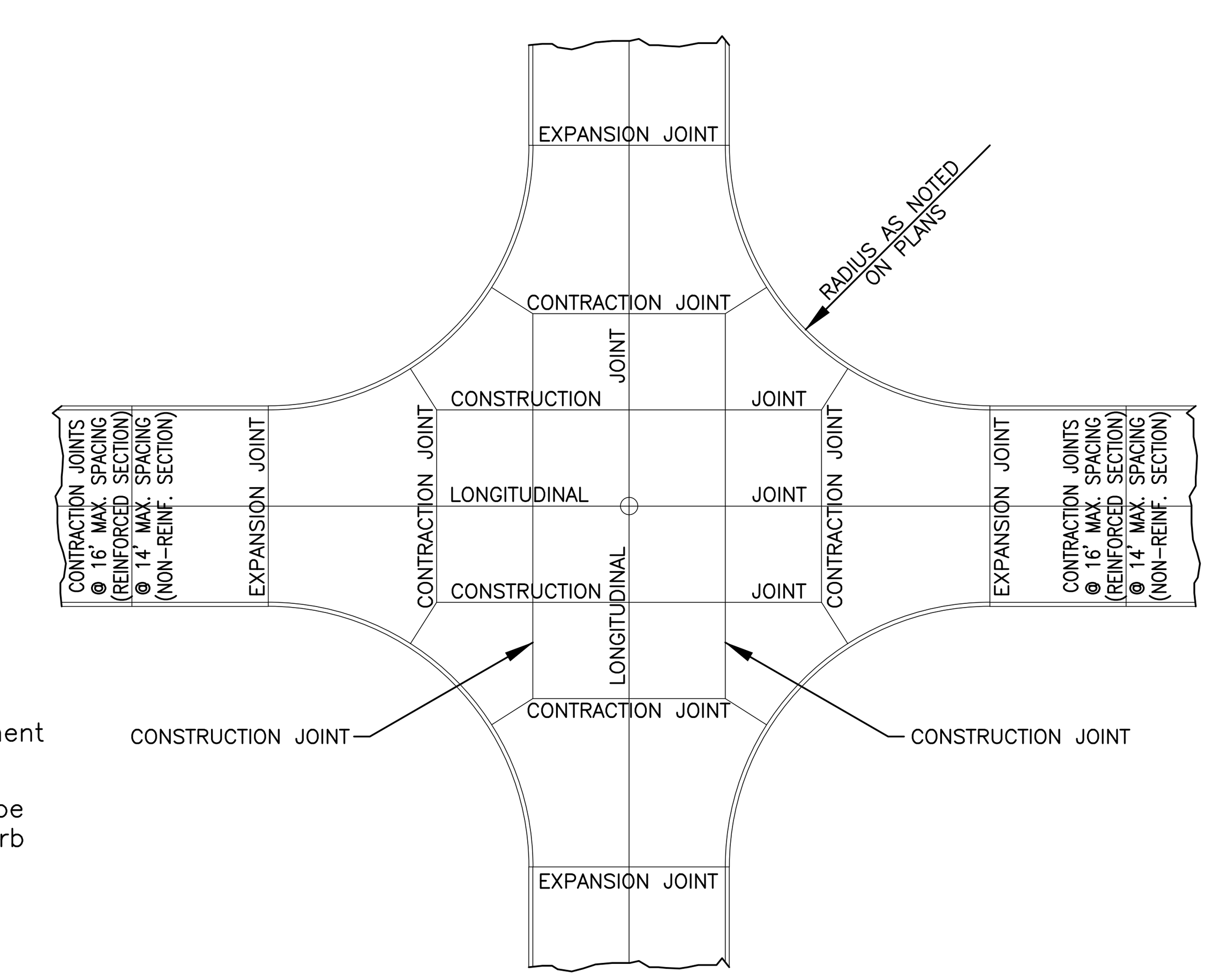
Note: Expansion control joints shall be as required by the City Engineer and as indicated on the subdivision improvement drawing.

All Catch Basins and Manholes shall be separated from the pavement and curb by Boxing-Out. Joints to be doweled, 3/4"Ø x 15" dowels @ 15" centers (Reinforced Section) 1"Ø x 18" dowels @ 12" centers (Non-Reinforced Section)

JOINT LEGEND
- C Contraction Joint
- E Expansion Joint
- L Longitudinal Joint
- K Construction Joint

TYPICAL JOINT ARRANGEMENT FOR CUL-DE-SACS

NOT TO SCALE

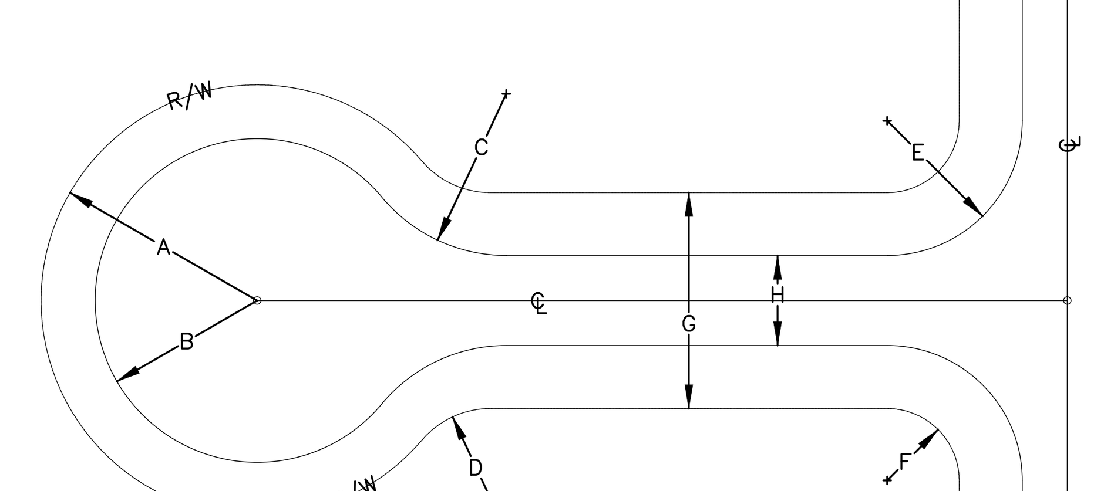


TYPICAL JOINT ARRANGEMENT FOR INTERSECTIONS

NOT TO SCALE

SCHEDULE OF DIMENSIONS

	INDUSTRIAL	RESIDENTIAL
A	75.00'	60.00'
B	50.00'	45.00'
C	50.00'	45.00'
D	25.00'	25.00'
E	55.00'	37.50'
F	30.00'	20.00'
G	70.00'	60.00'
H	29.00'	25.00'



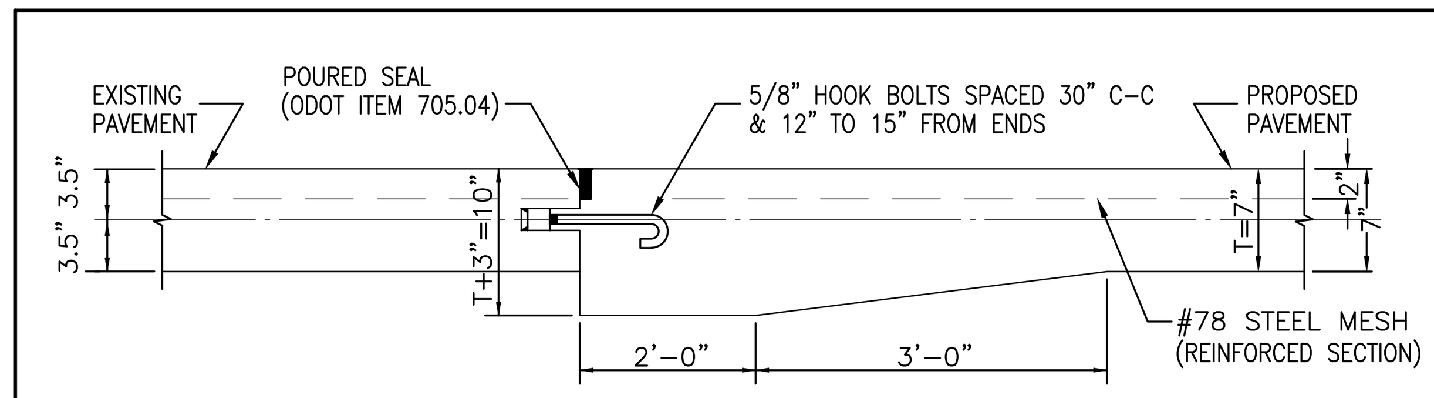
Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

HUNTINGTON PARK PHASE 4

PAVEMENT DETAILS

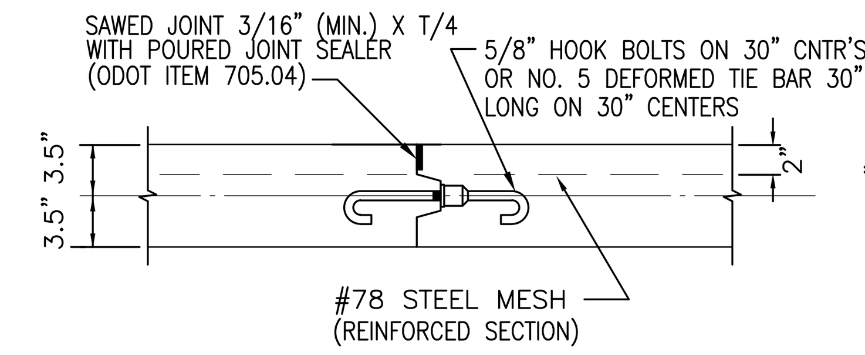
PROJECT NUMBER: 1966

DATE: 2021-09-02



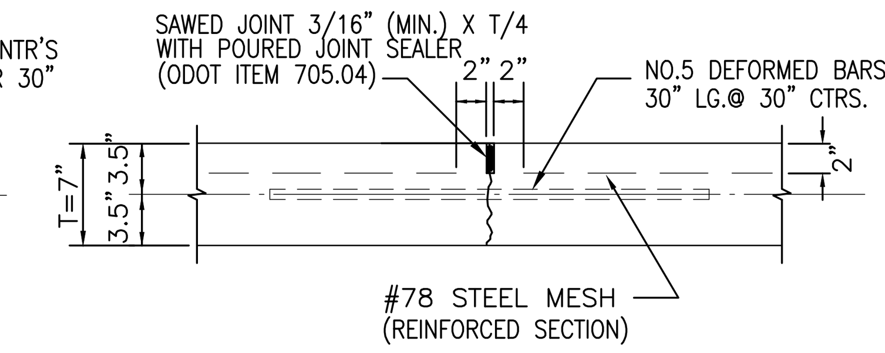
THICKENED EDGE JOINT WITH EXPANSION BOLTS

FOR JOINING NEW PAVEMENT TO EXISTING PAVEMENT
NOT TO SCALE



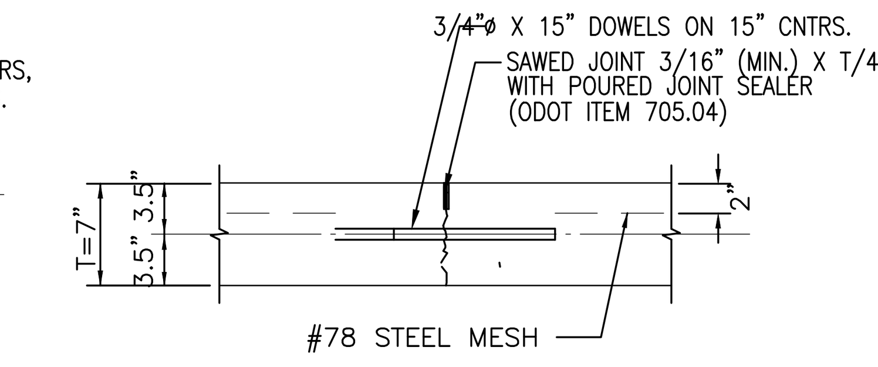
LONGITUDINAL KEY JOINT

NOT TO SCALE



LONGITUDINAL JOINT

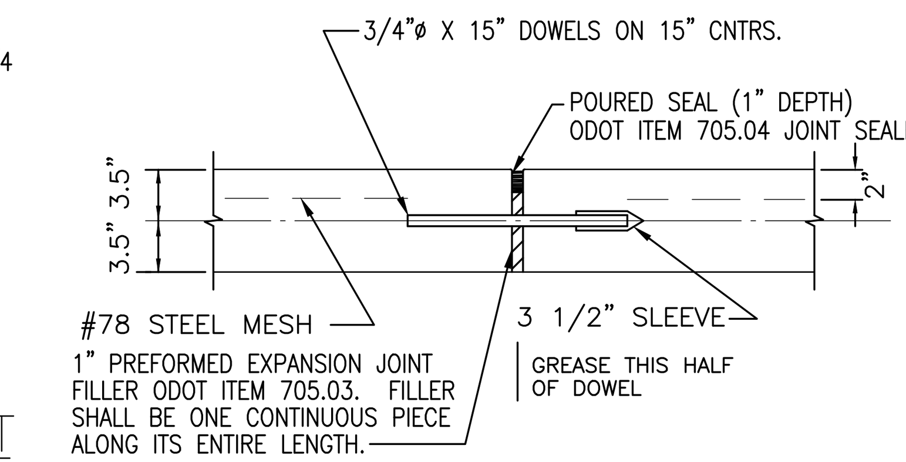
NOT TO SCALE



NOTE: DOWEL BASKETS SHALL BE PINNED IN PLACE

REINFORCED CONTRACTION JOINT

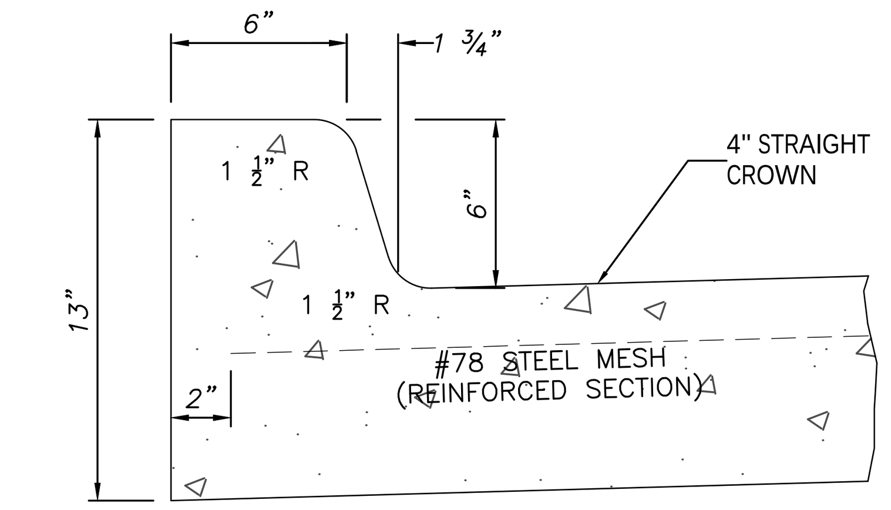
16' MAXIMUM SPACING
NOT TO SCALE



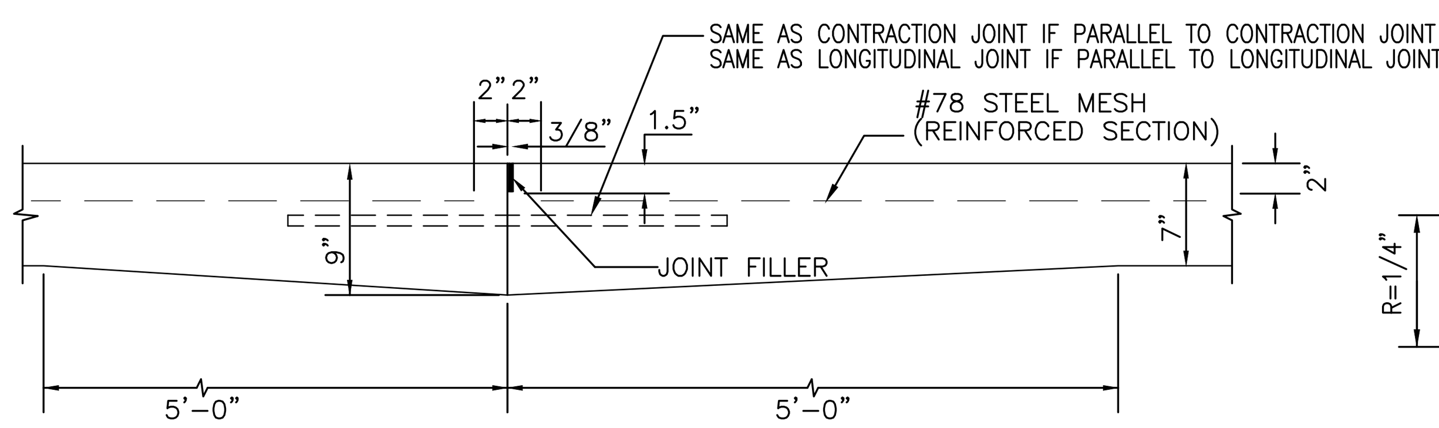
EXPANSION JOINTS SHALL BE USED AT ALL INTERSECTIONS, THE BEGINNING AND END OF ALL CURVES WITH LESS THAN A 500' RADIUS, AT A MINIMUM OF EVERY 500' AND WHERE DESIGNATED ON THE PLANS BY THE ENGINEER.

REINFORCED EXPANSION JOINT

NOT TO SCALE

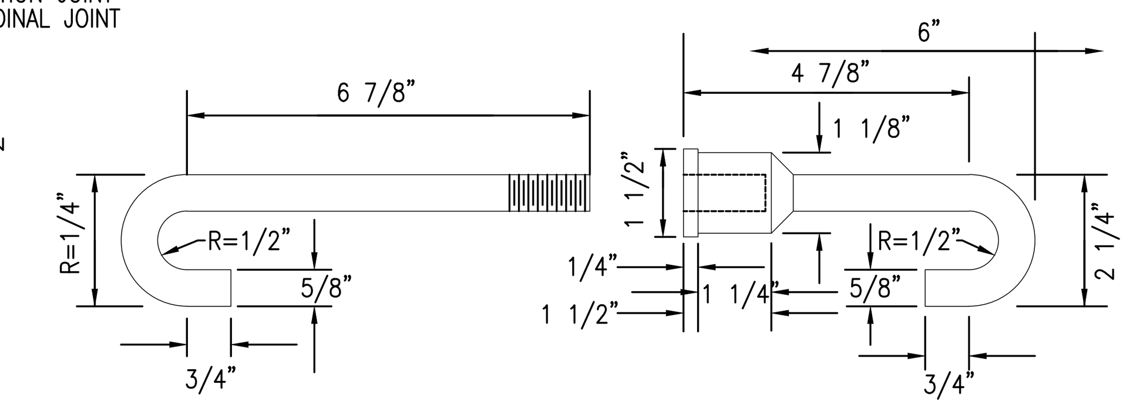


BARRIER TYPE CURB DETAIL



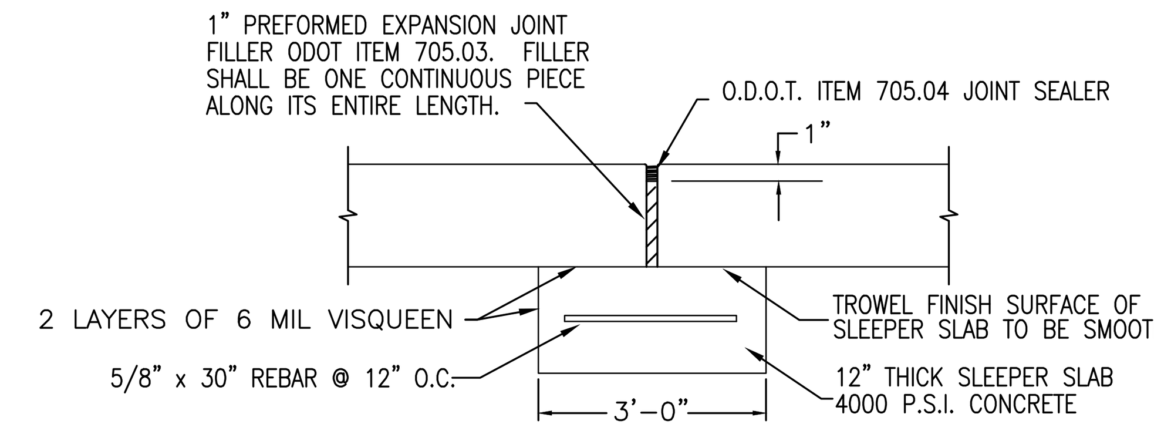
CONSTRUCTION JOINT

NOT TO SCALE



HOOK BOLT DETAIL

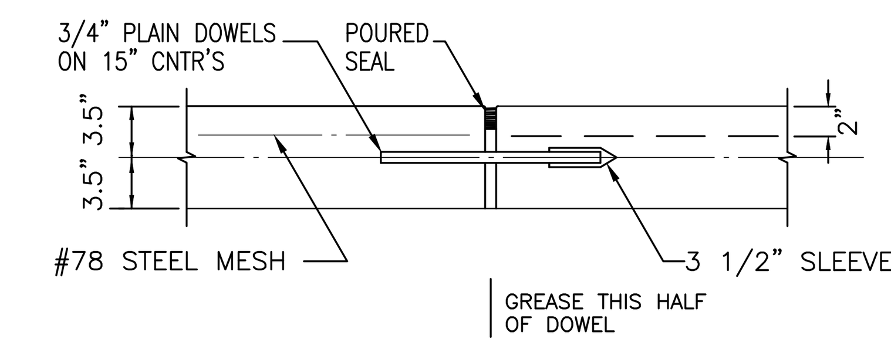
NOT TO SCALE



EXPANSION JOINTS SHALL BE USED AT ALL INTERSECTIONS, THE BEGINNING AND END OF ALL CURVES WITH LESS THAN A 500' RADIUS, AT A MINIMUM OF EVERY 500' AND WHERE DESIGNATED ON THE PLANS BY THE ENGINEER.

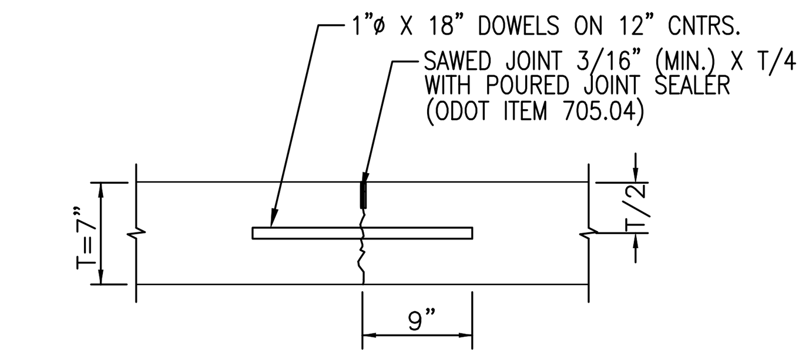
NON–REINFORCED EXPANSION JOINT

NOT TO SCALE



EXPANSION JOINT

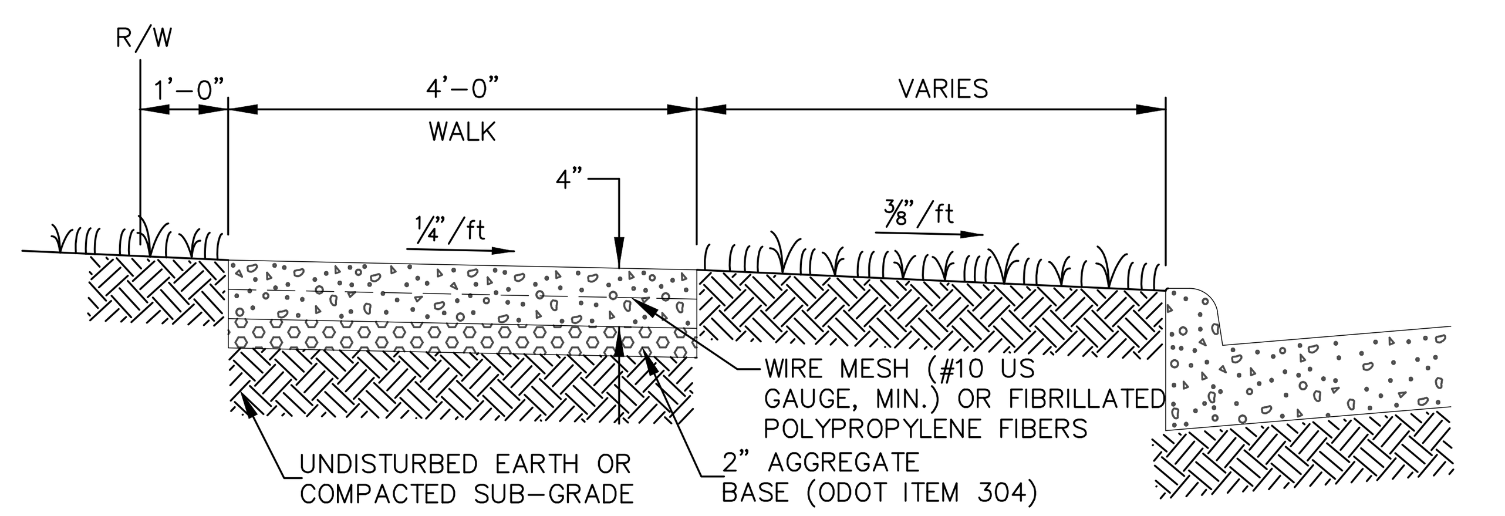
PLACE AT INTERSECTIONS, P.C.'S AND P.T.'S
Scale: 1"=1'-0"



NOTE: DOWEL BASKETS SHALL BE PINNED IN PLACE

NON–REINFORCED CONTRACTION JOINT

14' MAXIMUM SPACING
NOT TO SCALE



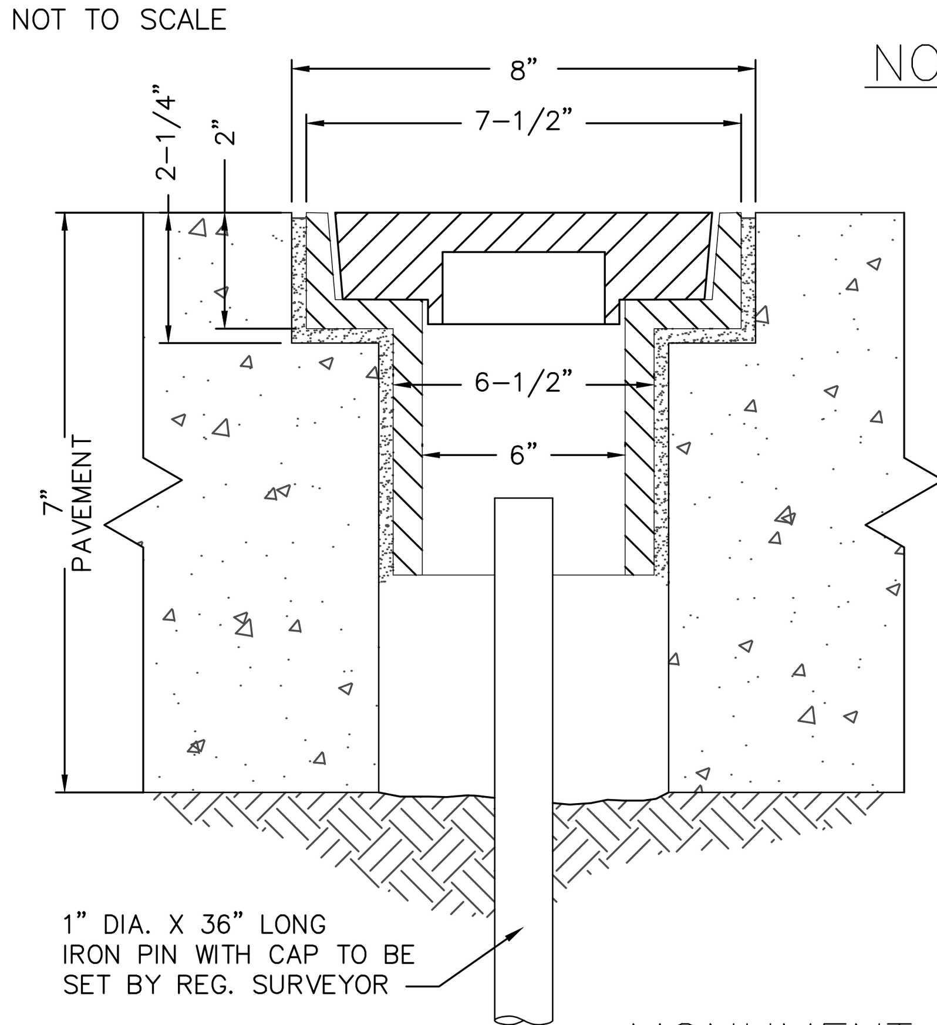
NOTES:
SIDEWALK SHALL BE CONSTRUCTED OF 4000 PSI CONCRETE AND HAVE A NON–SLIP BROOM FINISH SURFACE. FINISH SHALL BE PERPENDICULAR TO DIRECTION OF TRAFFIC.

SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 1462 – CONCRETE SURFACES AND CHAPTER 1480 – SIDEWALK CONSTRUCTION OF THE CODIFIED ORDINANCES OF NORTH ROYALTON, OHIO.

SIDEWALK THICKNESSES:
4"– TYPICAL
6"– RESIDENTIAL DRIVE APRONS
8"– COMMERCIAL DRIVE APRONS

CONCRETE SIDEWALK DETAIL

NOT TO SCALE
(SEE SHEET 7 OF 15 FOR LOCATION)



NOTES:
1. MONUMENT BOX CASTING TO BE EJIW 2960 W/ SPECIAL ORDER LID.
2. ANNULAR SPACE BETWEEN CASTING & PAVEMENT TO BE FILLED WITH NON–SHRINK GROUT PER ODOT 705.20.

INSTALLATION:
1. CORE BOTH OPENINGS IN PAVEMENT.
2. REMOVE DEBRIS & PREPARE CONC. PER GROUT MANUFACTURER'S INSTRUCTIONS.
3. COAT PAVEMENT OPENING AND EXTERIOR OF CASTING WITH GROUT.
4. INSTALL CASTING & FINISH FLUSH WITH EXISTING PAVEMENT

MONUMENT BOX DETAIL

NOT TO SCALE

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

HUNTINGTON PARK PHASE 4
PAVEMENT DETAILS

PROJECT NUMBER	1966
DATE	2021-09-02

LOCATION MAP
(N.T.S.)
LATITUDE: 41°19'40" N
LONGITUDE: 81°42'53" W

N

STORMWATER POLLUTION PREVENTION PLAN FOR

HUNTINGTON PARK PHASE 4

ANGELINA DRIVE, CITY OF NORTH ROYALTON
CUYAHOGA COUNTY, OHIO

SWPPP INDEX

Sheet Number	Sheet Title
12	SWPPP TITLE SHEET
13	STORMWATER POLLUTION PREVENTION PLAN
14	POND DETAILS
15	SWPPP NOTES
16	SWPPP NOTES
17	SWPPP NOTES & DETAILS
18	SWPPP NOTES & DETAILS

PROJECT DATA

TOTAL PROJECT AREA	22.61 AC
EARTH DISTURBED AREA	4.300
IMPERVIOUS AREA FOR PRE-CONSTRUCTION SITE	0.00 AC
PERCENT IMPERVIOUS PRE-CONSTRUCTION SITE	0%
IMPERVIOUS AREA FOR POST-CONSTRUCTION SITE	1.040
% IMPERVIOUS POST-CONSTRUCTION SITE	23%
"C" COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.300
"C" COEFFICIENT FOR POST-CONSTRUCTION SITE	0.490
CURVE NUMBER PRE-DEVELOPMENT	0.750
CURVE NUMBER POST-DEVELOPMENT	0.860
PRIOR LAND USE	VACANT AGRICULTURAL
TYPE OF CONSTRUCTION ACTIVITY	RESIDENTIAL
IMMEDIATE RECEIVING WATERS	CHIPPEWA CREEK
SUBSEQUENT RECEIVING WATERS	CUYAHOGA RIVER
PROJECT START DATE	TBD
PROJECT END DATE	TBD

STATE OF OHIO
CHRISTOPHER M. SCHMIDT
E-80749
REGISTERED
PROFESSIONAL ENGINEER

CHRISTOPHER M. SCHMIDT, P.E. 80749 DATE

APPROVALS

CITY OF NORTH ROYALTON ENGINEER DATE

DEVELOPER

JMR LAND DEVELOPMENT, LLC
8322 WINDSOR WAY
BROADVIEW HEIGHTS, OH 44147

CONTACT: JEFF RUCINSKI
216-272-5385

DESIGN ENGINEER

DAVEY RESOURCE GROUP
1310 SHARON COPLEY ROAD
P.O. BOX 37
SHARON CENTER, OHIO 44274

CONTACT: CHRIS SCHMIDT, P.E.
330-590-8004

CONTRACTOR

TBD

CERTIFICATION:
THE UNDERSIGNED HAS BEEN INFORMED AND UNDERSTANDS THEIR ROLE AND RESPONSIBILITY IN COMPLYING WITH THIS STORM WATER POLLUTION PREVENTION PLAN (SWP3):

SIGNATURE	PRINTED NAME	TITLE	COMPANY	DATE

CONTACT INFORMATION

	SWP3 CONTACT	EMERGENCY 24-HOUR CONTACT	FACILITY CONTACT	SITE SUPERVISOR
CONTACT				
COMPANY				
ADDRESS				
PHONE NUMBER				

OGPUPS
Ohio Oil & Gas Producers Underground Protection Service
800-925-0988 or 8-1-1
www.ogpups.org

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
CALL TWO WORKING DAYS BEFORE YOU DIG
(NON MEMBERS MUST BE CALLED DIRECTLY)

PROJECT DESCRIPTION:
THE PROJECT IS A RESIDENTIAL CONSTRUCTION OF 7 SUBLOTS WITH PAVEMENT, STORM SEWER, SANITARY SEWER, AND WATER MAINS.

DUTY TO INFORM:
NPDES AND SURFACE WATER POLLUTION PREVENTION PLAN
CONTRACTORS AND SUBCONTRACTORS RESPONSIBLE FOR ANY EARTH DISTURBING ACTIVITY HAVE THE DUTY TO INFORM CONTRACTORS AND SUBCONTRACTORS (OHIO EPA PERMIT NO. xxxx PART III. E)

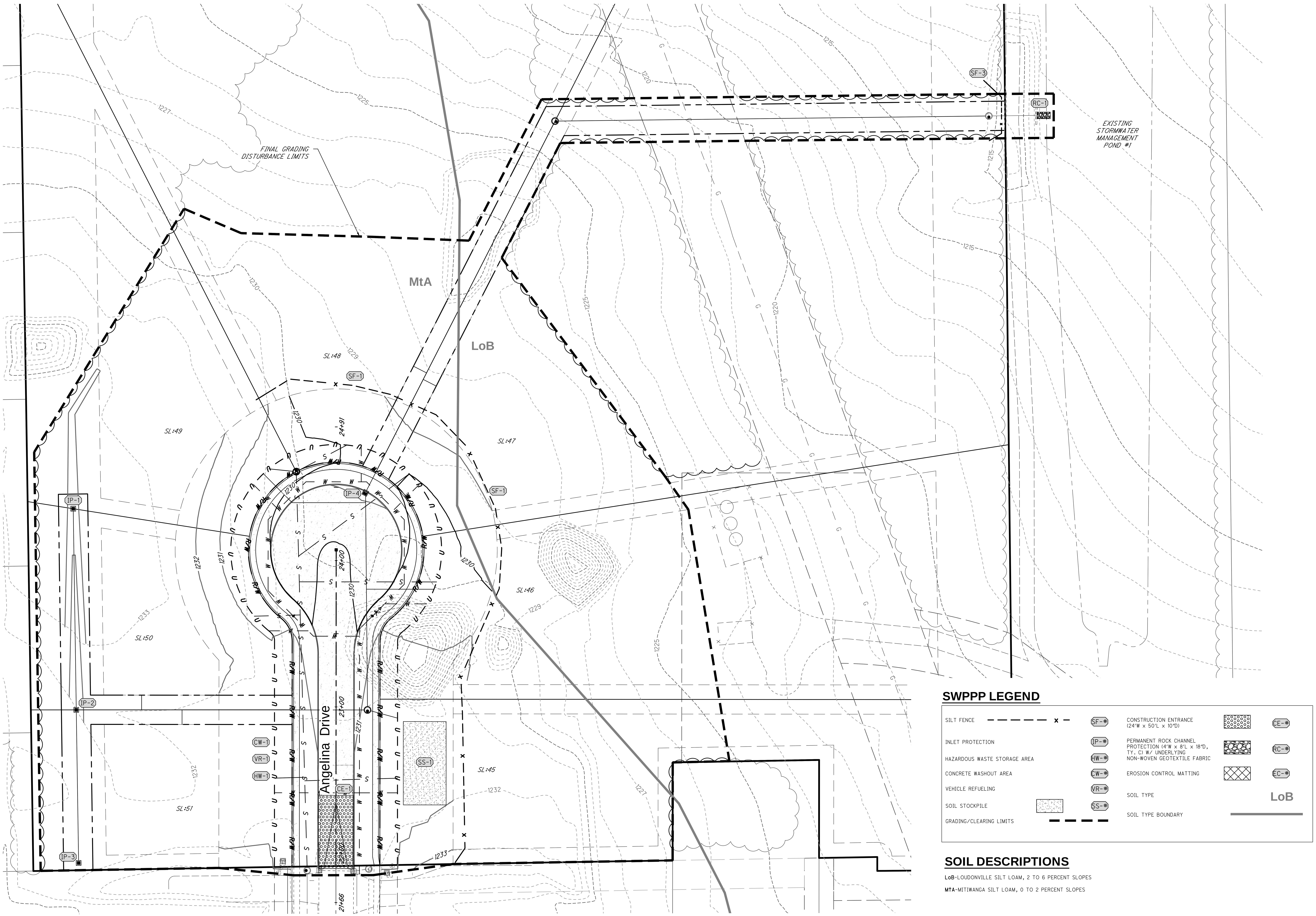
OHIO EPA FACILITY PERMIT NUMBER:
#xxxx

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423
DAVEY Resource Group

HUNTINGTON PARK PHASE 4
SWPPP TITLE SHEET

PROJECT NUMBER
1966

DATE
2021-09-02



SWPPP LEGEND

SILT FENCE	SF-#	CONSTRUCTION ENTRANCE (24'W x 50'L x 10"D)	CE-#
INLET PROTECTION	IP-#	PERMANENT ROCK CHANNEL PROTECTION (4'W x 8'L x 18"D, TY. C) W/ UNDERLYING NON-WOVEN GEOTEXTILE FABRIC	RC-#
HAZARDOUS WASTE STORAGE AREA	HW-#	EROSION CONTROL MATTING	EC-#
CONCRETE WASHOUT AREA	CW-#	SOIL TYPE	LoB
VEHICLE REFUELING	VR-#	SOIL TYPE BOUNDARY	
SOIL STOCKPILE	SS-#		
GRADING/CLEARING LIMITS			

SOIL DESCRIPTIONS

LoB-LOUDONVILLE SILT LOAM, 2 TO 6 PERCENT SLOPES

MtA-MITIWANGA SILT LOAM, 0 TO 2 PERCENT SLOPES

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

SCALE (IN FEET) 1 inch = 30 ft.

0 15 30 60

N

HUNTINGTON PARK PHASE 4

STORMWATER POLLUTION PREVENTION PLAN

PROJECT NUMBER: 1966

DATE: 2021-09-02

EROSION CONTROL NOTES:

GENERAL NOTES:

1. CONTRACTOR SHALL REVIEW AND STUDY THE PLANS AND SPECIFICATIONS. IMPLEMENTATION OF THE EROSION CONTROL ACTIVITIES SHOULD CORRESPOND TO CONSTRUCTION ACTIVITIES.
2. EROSION CONTROL MEASURES HAVE BEEN SHOWN FOR THE WORK AREAS AS IDENTIFIED ON THESE PLAN SHEETS. IF WORK IS CONDUCTED IN OTHER AREAS AS PART OF THIS PROJECT, ADDITION EROSION CONTROL MEASURES MAY BE REQUIRED.
3. THE OEPA PERMIT ASSOCIATED WITH THIS PLAN SHALL ACCOMPANY THIS PLAN AND BE RETAINED ON SITE DURING WORKING HOURS. THE IMPLEMENTATION OF SEDIMENT AND EROSION CONTROLS WILL BE IN ACCORDANCE WITH THE OHIO EPA NPDES CONSTRUCTION GENERAL PERMIT #OH000005 AND THE CITY OF NORTH ROYALTON CODIFIED ORDINANCES (THE MORE RESTRICTIVE SHALL APPLY IF CONFLICT EXISTS)
4. THE SWP3 SHALL CONTAIN SIGNATURES FROM ALL OF THE SUBCONTRACTORS ENGAGED IN ACTIVITIES THAT COULD IMPACT STORM WATER RUNOFF, INDICATING THAT THEY HAVE BEEN INFORMED AND UNDERSTAND THEIR ROLES AND RESPONSIBILITIES IN COMPLYING WITH THE SWP3. OHIO EPA RECOMMENDS THAT THE PRIMARY SITE OPERATOR REVIEW THE SWP3 WITH THE PRIMARY CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND KEEP A SWP3 TRAINING LOG TO DEMONSTRATE THAT THIS REVIEW OCCUR.
5. THE PROJECT ENGINEER OR EROSION CONTROL INSPECTOR SHOULD BE ABLE TO EXPLAIN THE SEDIMENT AND EROSION CONTROLS AND PLAN TO AN OUTSIDE INSPECTOR (I.E. OHIO EPA, ENVIRONMENTAL SERVICES, QAR INSPECTOR, COUNTY SCS).
6. OWNER AND CONTRACTOR SHALL COMPLY WITH SOIL SEDIMENT POLLUTION CONTROL ORDINANCES DURING CONSTRUCTION AND SHALL IMPLEMENT SEDIMENT CONTROL AS DIRECTED BY THE ENGINEER OR THE GOVERNING AGENCY.
7. ALL EROSION AND SEDIMENT CONTROL PRACTICES SPECIFIED ON THE PLANS SHALL CONFORM WITH DETAILS AND SPECIFICATIONS OUTLINED IN THE OHIO DEPARTMENT OF NATURAL RESOURCES MANUAL, "RAINWATER AND LAND DEVELOPMENT".
8. ALL CONTRACTORS AND BUILDERS ARE REQUIRED TO INSTALL, REGULARLY INSPECT AND MAINTAIN TEMPORARY SEDIMENTATION CONTROLS TO MINIMIZE SOIL EROSION AND OFF-SITE SILTATION.
9. REGULAR INSPECTION AND MAINTENANCE SHALL BE PROVIDED FOR ALL EROSION CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY SEVEN DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD. REFERENCE SECTION 5 OF THE SWP3 REPORT.
10. IF AN INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH THE EXCEPTION OF A SEDIMENT SETTLING POND, IT MUST BE REPAIRED OR MAINTAINED WITHIN THREE DAYS OF THE INSPECTION. SEDIMENT SETTLING PONDS MUST BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION.
11. IF AN INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWP3 SHALL BE AMENDED AND THE NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 24 HOURS FROM THE DATE OF THE INSPECTION.
12. IF AN INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE EROSION CONTROL IMPLEMENTATION SCHEDULE, THE CONTROL PRACTICE MUST BE IMPLEMENTED WITHIN 24 HOURS FROM THE DATE OF THE INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD MUST CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT NEEDED.
13. EROSION AND SEDIMENT CONTROL PRACTICES NOT ALREADY SPECIFIED MAY BE NECESSARY DUE TO UNFORESEEN ENVIRONMENTAL CONDITIONS AND/OR CHANGES IN THE DRAINAGE PATTERNS CAUSED BY EARTH-MOVING ACTIVITY. IF UNFORESEEN EROSION IS ENCOUNTERED DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES SHALL BE PROVIDED, AS DIRECTED BY THE ENGINEER, AT THE OWNER'S EXPENSE.
14. THE CONTRACTOR SHALL COMPLY WITH ANY FIELD ORDERS FOR SEDIMENT CONTROL AS ISSUED BY EITHER THE ENGINEERING DEPARTMENT, THE COUNTY OR THE OWNER'S ENGINEER.
15. THE CONSTRUCTION ENTRANCE SHALL BE PREPARED WITH EROSION MEASURES AND SILT FENCE SHALL BE INSTALLED BEFORE ANY ON-SITE CONSTRUCTION OR DEMOLITION COMMENCES.
16. SEDIMENT TRAPS AND INLET PROTECTION SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AT THE START OF CLEARING AND GRUBBING. UPON COMPLETION OF CONSTRUCTION OF PONDS, SEEDING AND MULCHING SHALL IMMEDIATELY FOLLOW TO AID IN THE STABILIZATION AND MINIMIZE EROSION AND SEDIMENT TRANSPORT OF THE SOIL BEFORE WATER LEAVES THE POND. ALL EROSION AND SEDIMENT CONTROLS SHALL CONTINUE TO FUNCTION UNTIL DISTURBED AREAS ARE RE-STABILIZED.
17. ROCK RIP-RAP, IF SPECIFIED, SHALL BE IN PLACE BEFORE THE STORM SEWER IS FUNCTIONING.
18. TEMPORARY SILT BASINS & TEMPORARY DIVERSIONS ARE TO BE REMOVED, RESTORED TO ORIGINAL GRADE, AND STABILIZED WITH VEGETATION WHEN CONTRIBUTING DRAINAGE AREA IS STABILIZED WITH VEGETATION, EXCLUDING DISTURBANCES RESULTING FROM ACTIVE HOME BUILDING.
19. EROSION CONTROL NETTING SHALL BE USED ON DITCHES GREATER THAN 1.5% AND EROSION CONTROL MATTING ON ALL OTHER SLOPES GREATER THAN 6%.
20. SILT FENCE IS TO BE CONSTRUCTED AT LOCATIONS SHOWN ON THE PLANS PER "SPECIFICATIONS FOR SILT FENCE". SILT FENCE SHALL BE PLACED PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
21. EROSION CONTROL MEASURES MUST BE PROVIDED AROUND ALL DIRT STOCKPILES AND OTHER TEMPORARILY DISTURBED AREAS.
22. THE OUTLET OF THE STORM COLLECTION SYSTEM WILL BE PROPERLY DESIGNED WITH VELOCITY DISSIPATING STRUCTURES/MEDIA. BY USING THESE PRACTICES, NO EROSIVE FLOW VELOCITIES ARE EXPECTED AT THE DISCHARGE LOCATION.
23. UPON THE COMPLETION OF EARTH MOVING ACTIVITIES IN ANY GIVEN AREA, ALL DISTURBED AND ERODED EARTH SHALL BE REGRADED AND SEEDED WITHIN SEVEN DAYS BY USING BIN RUN OATS OR ANNUAL RYE TO PROVIDE STABILITY AND SEDIMENT CONTROL. WHERE POSSIBLE, GROWTH SHALL NOT BE MOWED UNTIL IT HAS GONE TO SEED FOR ONE YEAR.
24. PERMANENT GROUND COVER SHALL BE ESTABLISHED AS SOON AS POSSIBLE IN ACCORDANCE WITH THE PLAN.
25. MINIMIZE TRACKING OF SEDIMENTS BY VEHICLES BY UTILIZING THE CONSTRUCTION ENTRANCE AS THE ONLY ENTRANCE FOR VEHICLES. MAINTAIN THIS ENTRANCE WITH STONE AS NEEDED TO PREVENT DIRT AND MUD FROM TRACKING ONTO THE ROADWAY. REGULAR SWEEPING OF THE ROADWAY MAY BE NECESSARY TO ENSURE ROADWAY DOES NOT BUILD UP WITH SEDIMENTS. STREETS DIRECTLY ADJACENT TO CONSTRUCTION ENTRANCES AND RECEIVING TRAFFIC FROM THE DEVELOPMENT AREA SHALL BE CLEANED DAILY TO REMOVE SEDIMENT TRACKED OFF-SITE. IF APPLICABLE, THE CATCH BASINS ON THESE STREETS NEAREST THE CONSTRUCTION ENTRANCES SHALL ALSO BE CLEANED WEEKLY.
26. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF (THIS INCLUDES WASHING OUT OF CEMENT TRUCKS). WASH PIT AREAS ARE TO BE DESIGNATED BY THE CONTRACTOR IN AREAS AWAY FROM AREAS OF CONCENTRATED STORM WATER RUNOFF.
27. ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 4 DAYS OR MORE MUST BE TEMPORARILY SEEDED AND MULCHED UNTIL CONSTRUCTION ACTIVITIES COMMENCE.
28. MAKE FIELD ADJUSTMENTS TO:
    A) MEET FIELD CONDITIONS
    B) ANTICIPATE FUTURE WORK
    C) MAKE CORRECTION BASED ON THE WEEKLY INSPECTIONS
29. ALL FUELING VEHICLES SHALL BE EQUIPPED WITH SPILL KITS. ANY SPILLS OVER 5 GALLONS (OR THE MINIMUM REPORTING LEVEL) SHALL BE REPORTED TO THE APPROPRIATE AGENCY ACCORDING TO STATE AND LOCAL LAWS. FOR SPILLS OVER 25 GALLONS, CONTACT THE EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES. A SPCC PLAN MUST BE DEVELOPED FOR SITES WITH ONE ABOVE GROUND STORAGE TANK (AST) OF 660 GALLONS OR MORE, TOTAL ABOVE GROUND TANK STORAGE OF 1330 GALLONS, OR BELOW GROUND STORAGE OF 42,000 GALLONS OF FUEL.
30. SITE STABILIZATION, EITHER PERMANENT OR TEMPORARY, MUST FOLLOW THE REQUIREMENTS AS APPLICABLE ON THE TABLES ON THIS SHEET.
31. CONTRACTOR TO IMPLEMENT GOOD HOUSEKEEPING PRACTICES THROUGHOUT CONSTRUCTION.

EROSION CONTROL NOTES (CONTINUED):

32. ANY CONTAMINATED SOILS ENCOUNTERED SHALL BE STOCKPILED PER DIRECTION OF OWNER'S REPRESENTATIVE. "CLEAN" SOIL SHALL BE STOCKPILED SEPARATELY FROM CONTAMINATED SOIL AND SHALL NOT BE COMMINGLED. CONTAMINATED SOILS SHALL BE PLACED ON, AND COVERED WITH VISQUEEN. A BERM SHALL BE CONSTRUCTED AROUND ENTIRE STOCKPILE TO HOLD VISQUEEN DOWN AND PREVENT SURFACE WATER AND RAIN FROM ENTERING SOIL PILE. ALL SEALS OR OVERLAPS IN THE VISQUEEN COVERING SHALL BE SECURED. ALL CONTAMINATED SOILS MUST BE TREATED AND/OR DISPOSED IN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES (TSDF'S).
33. ADDITIONAL EROSION CONTROL MEASURES MAY BECOME NECESSARY DUE TO CONSTRUCTION SEQUENCING. CONTRACTOR SHALL CONSULT WITH ENGINEER TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY.
34. UNDER NO CIRCUMSTANCE SHALL CONCRETE TRUCKS WASH OUT DIRECTLY INTO A DRAINAGE CHANNEL, STORM SEWER OR SURFACE WATERS OF THE STATE.
35. CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS. WASTE DISPOSAL BY OPEN BURNING IS PROHIBITED. CONTRACTOR SHALL PROPERLY DISPOSE ANY CONTAMINATED SOILS, HAZARDOUS WASTE OR ASBESTOS CONTAINING MATERIAL ENCOUNTERED ON SITE ACCORDING TO CONTRACT DOCUMENTS.
36. CONTAINERS (E.G., DUMPSTERS, DRUMS) MUST BE MADE AVAILABLE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTE. ALL CONTAINERS MUST BE COVERED AND LEAK- PROOF. NO TOXIC OR HAZARDOUS WASTES SHALL BE DISPOSED INTO STORM DRAINS, SEPTIC TANKS, OR BY BURYING, BURNING, OR MIXING OF WASTES.
37. CONSTRUCTION AND DEMOLITION DEBRIS SHALL BE TRANSPORTED TO A LICENSED DISPOSAL FACILITY. THE MATERIAL SHALL BE COVERED WHILE BEING TRANSPORTED.
38. THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DEWATERING ACTIVITIES. IF TRENCH OR GROUND WATER CONTAINS SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE, PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BY SETTING IN PLACE OR BY DEWATERING INTO A SUMP PIT, FILTER BAG OR COMPARABLE PRACTICE. GROUND WATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS IS NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE. HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.
39. ALL EROSION AND SEDIMENT CONTROL SPECIFICATIONS, APPLICATIONS AND TIMETABLES ARE BASED ON THE DESCRIPTIONS AND STANDARDS OF THE OHIO DEPARTMENT OF NATURAL RESOURCES "RAINWATER AND LAND DEVELOPMENT MANUAL".
40. CONTRACTOR IS NOT TO PLACE ANY FILL OR STOCKPILE MATERIAL OUTSIDE OF CONSTRUCTION/ CLEARING LIMITS.

TEMPORARY STABILIZATION

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50 FEET OF A STREAM AND NOT AT FINAL GRADE	IMMEDIATELY AFTER THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 4 DAYS
FOR ALL OTHER CONSTRUCTION ACTIVITIES, ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 4 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE	IMMEDIATELY AFTER THE MOST RECENT DISTURBANCE WITHIN THE AREA FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER
WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED. THESE TECHNIQUES MAY INCLUDE MULCHING, EROSION MATTING, OR PLACEMENT OF STONE.	

PERMANENT STABILIZATION

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE	IMMEDIATELY AFTER THE MOST RECENT DISTURBANCE
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE	IMMEDIATELY AFTER REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE	IMMEDIATELY AFTER REACHING FINAL GRADE WITHIN THAT AREA

SWPPP NOTES

ROCK RIP-RAP SHALL BE IN PLACE BEFORE THE STORM SEWER IS FUNCTIONING.

FOR DISTURBED AREAS REMAINING IDLE THRU WINTER, TEMPORARY EROSION CONTROL MUST BE APPLIED PRIOR TO THE ONSET OF WINTER WEATHER.

TEMPORARY SEDIMENT BASINS & TEMPORARY DIVERSIONS ARE TO BE REMOVED, RESTORED TO ORIGINAL GRADE, AND STABILIZED WITH VEGETATION WHEN CONTRIBUTING DRAINAGE AREA IS STABILIZED WITH VEGETATION, EXCLUDING DISTURBANCES RESULTING FROM ACTIVE HOME BUILDING.

DISTURBED AREA SHOULD DRAIN TO THE ROAD/INLETS. INSTALL DIVERSIONS AS NEEDED TO ENSURE THIS DRAINAGE PATTERN.

TRACKING OF SEDIMENTS ONTO ROADWAYS BY VEHICLES SHALL BE MINIMIZED BY UTILIZING THE CONSTRUCTION ENTRANCE AS THE ONLY ENTRANCE FOR VEHICLES. THIS ENTRANCE SHALL BE MAINTAINED WITH STONE AS NEEDED TO PREVENT DIRT AND MUD FROM TRACKING ONTO THE ROADWAY. REGULAR SWEEPING OF THE ROADWAY MAY BE NECESSARY TO ENSURE THAT SEDIMENTS DO NOT BUILD UPON THE ROADWAY.

NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF. (THIS INCLUDES WASHING OUT CEMENT TRUCKS). DESIGNATED WASH PIT AREAS SHOWN ON THE PLANS SHALL BE USED FOR THIS PURPOSE. ALL WASTE MUST BE KEPT AWAY FROM AREAS OF STORM WATER RUNOFF.

WINTERIZATION- ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 OR MUST HAVE A DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.

PERIMETER CONTROLS

SEDIMENT BASIN/ TRAPS AND PERIMETER SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND AT THE START OF CLEARING AND GRUBBING. UPON COMPLETION OF CONSTRUCTION OF PONDS, SEEDING AND MULCHING SHALL IMMEDIATELY FOLLOW TO AID IN THE STABILIZATION AND MINIMIZE EROSION AND SEDIMENT TRANSPORT OF THE SOIL BEFORE WATER LEAVES THE POND. ALL EROSION AND SEDIMENT CONTROLS SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE PERMANENTLY STABILIZED, OR AS DIRECTED BY THE ADMINISTRATOR.

INLET PROTECTION:

ENSURE THE BOTTOM OF THE FABRIC IS EMBEDDED IN THE GROUND AND THE FRAME OF THE INLET PROTECTOR HAS NOT COLLAPSED. CLEANOUT SEDIMENT ONCE 40% OF CAPACITY IS LOST. INSURE THAT THE INLET IS NOT CAUSING STORM WATER TO BYPASS THE INLET. MAINTAIN BYPASS PREVENTION DIKE.

CONSTRUCTION ENTRANCE:

ENSURE THAT THE CONSTRUCTION ENTRANCE IS APPROPRIATELY SIZED TO MINIMIZED TRACKING ONTO THE ROADWAY. TOP DRESS GRAVEL EMBEDDED WITH SEDIMENT WITH CLEAN GRAVEL AS NEEDED. RESTRICT VEHICULAR ACCESS TO STABILIZED AREAS TO MINIMIZED OFF SITE TRACKING.

VEGETATIVE STABILIZATION:

SEE TEMPORARY AND PERMANENT STABILIZATION TABLES ON THIS SHEET FOR APPROPRIATE VEGETATIVE STABILIZATION.

ADDITIONAL BEST MANAGEMENT PRACTICES

EROSION AND SEDIMENT CONTROL PRACTICES NOT ALREADY SPECIFIED ON THIS PLAN MAY BE NECESSARY DUE TO UNFORESEEN ENVIRONMENTAL CONDITIONS, CONSTRUCTION PHASING AND/OR CHANGES IN DRAINAGE PATTERNS CAUSED BY EARTH MOVING ACTIVITY. ADDITIONAL PRACTICES, AND/OR A REVISED SWPPP SHALL BE REQUIRED AT THE DEVELOPERS EXPENSE AS DIRECTED BY THE ADMINISTRATOR.

RAINWATER MANUAL:

ALL EROSION AND SEDIMENT CONTROL PRACTICES SPECIFIED ON THIS PLAN SHALL CONFORM WITH DETAILS AND SPECIFICATIONS OUTLINED IN THE CURRENT EDITION OF THE ODNR "RAINWATER & LAND DEVELOPMENT MANUAL"

BEST MANAGEMENT PRACTICES (BMP) DECOMMISSIONING:

NO EROSION AND SEDIMENT CONTROL BMP'S SHALL BE REMOVED FROM THE SITE PRIOR TO ADEQUATE PERMANENT STABILIZATION OF THE ASSOCIATED UPLAND DRAINAGE AREAS AND WITHOUT FIRST OBTAINING AUTHORIZATION FROM THE ADMINISTRATOR, UNLESS THEIR REMOVAL IS SPECIFICALLY PROVIDED FOR WITHIN THE SITES APPROVED PLAN. MAINTENANCE AND DECOMMISSIONING OF SEDIMENT CONTROL RETROFITS ON PERMANENT STORMWATER FACILITIES SERVING MULTIPLE SUBLOTS SHALL REMAIN THE RESPONSIBILITY OF THE SITE DEVELOPER UNTIL SUCH A TIME THE ADMINISTRATOR RELEASES THE DEVELOPER OF SUCH RESPONSIBILITY.

ADDITIONAL WASTES:

ALL SOLID, SANITARY, AND TOXIC WASTE MUST BE DISPOSED OF IN A PROPER MANNER. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORMWATER RUNOFF. ANY AND ALL WASTE MATERIALS (SOLID, HAZARDOUS, CONSTRUCTION & DEMOLITION, SANITARY, TOXIC, ETC.) GENERATED AT THE SITE SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL RULES/ REGULATIONS. IT IS PROHIBITED TO BURN, BURY OR POUR OUT ONTO THE GROUND OR INTO STORM SEWERS ANY SOLVENTS, PAINTS, GASOLINE, DIESEL FUEL, USED MOTOR OIL, HYDRAULIC FLUID, ANTIFREEZE, CEMENT CURING COMPOUNDS, AND ANY OTHER SUCH TOXIC OR HAZARDOUS MATERIALS OR WASTES. DESIGNATED WASH PIT AREAS SHOWN ON THE PLANS SHALL BE USED FOR THIS PURPOSE. ALL WASTE MUST BE KEPT AWAY FROM AREAS OF STORMWATER RUNOFF.

GENERAL NOTES:

TRACKING OF SEDIMENTS ONTO ROADWAYS BY VEHICLES SHALL BE MAINTAINED BY UTILIZING THE CONSTRUCTION ENTRANCE AS THE ONLY ENTRANCE FOR VEHICLES. THIS ENTRANCE SHALL BE MAINTAINED BY STONE AS NEEDED TO PREVENT DIRT AND MUD FROM TRACKING ONTO THE ROADWAY. REGULAR SWEEPING OF THE ROADWAY MAY BE NECESSARY TO ENSURE THAT SEDIMENTS DO NOT BUILD UPON THE ROADWAY.

NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORMWATER RUNOFF. THIS INCLUDES WASHING OUT OF CEMENT TRUCKS. DESIGNATED WASH PIT AREAS SHOWN ON THE PLANS SHALL BE USED FOR THIS PURPOSE. ALL WASTE MUST BE KEPT AWAY FROM AREAS OF STORMWATER RUNOFF.

EROSION AND SEDIMENT CONTROL IMPLEMENTATION SCHEDULE

CONSTRUCTION ACTIVITY	STAGE TO BE COMPLETED
CONDUCT PRE-CONSTRUCTION MEETING.	INITIAL
PROVIDE TEMPORARY SANITARY FACILITIES AND DUMPSTERS.	INITIAL
PREPARE CONSTRUCTION ENTRANCE. MOBILIZE ONLY THE EQUIPMENT NEEDED FOR THIS BMP. CLEAN EQUIPMENT FOLLOWING THIS CONSTRUCTION.	INITIAL
CONSTRUCT SILT FENCE. MOBILIZE ONLY THE EQUIPMENT NEEDED FOR THIS BMP.	INITIAL
MOBILIZE CONSTRUCTION EQUIPMENT AS NECESSARY FOR PROJECT.	INITIAL
INSTALL INLET PROTECTION ON EXISTING STRUCTURES	INITIAL
INSTALL INLET PROTECTION FOR PROPOSED STRUCTURES CONCURRENT WITH UTILITY CONSTRUCTION.	INTERMEDIATE
GRADE SITE	INTERMEDIATE
APPLY TEMPORARY SEEDING AS NEEDED	INTERMEDIATE
PERFORM PERMANENT SEEDING IMMEDIATELY UPON COMPLETION OF FINAL GRADING IN UNPAVED AREAS.	FINAL
REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SITE ACHIEVES "FINAL STABILIZATION".	FINAL
RESTORE POND(S) TO ITS (THEIR) ORIGINAL DESIGN VOLUMES (I.E. DREDGING ACCUMULATED SEDIMENTS) ONCE THE CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED AND PRIOR TO CONVEYING LONG-TERM MAINTENANCE RESPONSIBILITIES TO THE OWNER/ OPERATOR	FINAL

INITIAL (PROJECT STAGE):
BMP'S ARE INSTALLED THAT ARE NECESSARY FROM THE MOMENT OF INITIAL CLEARING AND GRUBBING UP UNTIL THE TIME WHERE ALL INITIAL PERIMETER CONTROL BMP'S DESIGNED TO FUNCTION THROUGHOUT THE PERIOD OF MASS GRADING, AND PERHAPS BEYOND, ARE IN PLACE.

INTERMEDIATE (PROJECT STAGE):
INTERIM BMP'S THAT WILL BE NECESSARY AFTER THE START OF MASS GRADING UP UNTIL THE SITE IS READY FOR FINAL GRADING.

FINAL (PROJECT STAGE):
BMP'S ASSOCIATED WITH FINAL GRADING AND STABILIZATION OF REMAINING BARE AREAS WILL BE ACCOMPLISHED AND WHICH SEDIMENT CONTROL BMP'S WILL REMAIN IN PLACE TO SERVE DISTURBANCES CAUSED BY INDIVIDUAL LOT CONSTRUCTION.

MAINTENANCE & INSPECTION SCHEDULE:

REGULAR INSPECTIONS AND MAINTENANCE BY THE DEVELOPER OR THEIR QUALIFIED REPRESENTATIVE SHALL BE PROVIDED FOR ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTION ACTIVITIES SHALL BE KEPT ON-SITE THROUGHOUT THE CONSTRUCTION PERIOD, AND THESE RECORDS WILL BE MAINTAINED FOR THREE YEARS FROM THE DATE OF PROJECT NOTICE OF TERMINATION. INSPECTIONS MUST BE MADE AT A MINIMUM OF ONCE EVERY SEVEN (7) DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24-HOUR PERIODS. PROVIDE THE NAME OF THE INSPECTOR, DATE OF INSPECTION, MAJOR OBSERVATIONS (IDENTIFY TYPE AND LOCATION OF EACH SEPARATE BMP REQUIRING ATTENTION, DESCRIBE CONDITION OF DAMAGED BMP, SPECIFY TYPE OF REMEDIAL ACTION REQUIRED, ETC), AND SPECIFY CORRECTIVE MEASURES TAKEN SINCE THE TIME OF THE PREVIOUS INSPECTION TO ACHIEVE COMPLIANCE WITH THE REQUIREMENTS OF THE SITES APPROVED PLAN, THE "RAINWATER AND LAND DEVELOPMENT" MANUAL, AND ANY OTHER REQUIRED EROSION CONTROL PERMITS.

MAINTENANCE SHALL OCCUR AS DETAILED BELOW:

A. WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE: IF THE INTERNAL INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH THE EXCEPTION OF A SEDIMENT-SETTLING POND, IT MUST BE REPAIRED OR MAINTAINED WITHIN 24 HOURS OF THE INSPECTION. SEDIMENT SETTLING PONDS MUST BE REPAIRED WITHIN TEN (10) DAYS OF THE INSPECTION.
B. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION: IF THE INTERNAL INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWPPP MUST BE AMENDED AND THE NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 24 HOURS OF THE INSPECTION.
C. WHEN PRACTICES DEPICTED ON THE SWPPP ARE NOT INSTALLED: IF THE INTERNAL INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE SCHEDULE, THE CONTROL PRACTICE MUST BE IMPLEMENTED WITHIN 24 HOURS FROM THE DATE OF INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD MUST CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT NEEDED.

SILT FENCE:

1. INSURE THAT THE BOTTOM OF THE SILT FENCE IS EMBEDDED IN THE GROUND.
2. THE TOP OF THE SILT FENCE SHALL BE DRAWN TIGHT BETWEEN POSTS.
3. SILT SHALL BE REMOVED ONCE 40% OF THE CAPACITY IS LOST OR THE FENCE SHALL BE REPLACED.
4. JOINTS BETWEEN SECTIONS SHALL BE TIGHTLY JOINED WITHOUT GAPS.

CONSTRUCTION ENTRANCE:

1. ENSURE THAT THE CONSTRUCTION ENTRANCE IS APPROPRIATELY SIZED TO MINIMIZED TRACKING ONTO THE ROADWAY.
2. TOP DRESS GRAVEL EMBEDDED WITH SEDIMENT WITH CLEAN GRAVEL AS NEEDED.
3. RESTRICT VEHICULAR ACCESS TO STABILIZED AREAS TO MINIMIZED OFF SITE TRACKING.

VEGETATIVE STABILIZATION:

1. ENSURE A 70% STAND ESTABLISHMENT RATE.
2. REPAIR THOSE AREAS THAT DO NOT MINIMIZE OFF SITE TRACKING.

INLET PROTECTION:

1. INSURE THE BOTTOM OF THE FABRIC IS EMBEDDED IN THE GROUND AND THE FRAME OF THE INLET PROTECTOR HAS NOT COLLAPSED.
2. CLEAN OUT SEDIMENT ONCE 40% OF CAPACITY IS LOST.
3. INSURE THAT THE INLET IS NOT CAUSING STORM WATER TO BYPASS THE INLET.
4. MAINTAIN BYPASS PREVENTION DIKE.

SEDIMENT TRAP/BASIN:

1. THE CAPACITY AND FUNCTION OF THE SEDIMENT TRAP SHALL BE MAINTAINED BY INSPECTING ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT, AND BY PERFORMING THE NECESSARY ACTIVITIES SHOWN BELOW.
2. ESTABLISH VEGETATIVE COVER AND FERTILIZE AS NECESSARY TO MAINTAIN A VIGOROUS COVER AROUND THE SEDIMENT TRAP.
3. MOW GRASS TO MAINTAIN A HEIGHT OF 4 TO 6 INCHES. REMOVE GRASS CLIPPINGS.
4. BASED ON INSPECTION, PLANT AN ALTERNATIVE GRASS SPECIES IF THE ORIGINAL GRASS COVER HAS NOT BEEN SUCCESSFULLY ESTABLISHED.
5. INSPECT THE POOL AREA, EMBANKMENT AND SPILLWAY AREA FOR BURROWING RODENTS, SLOPE FAILURE, SEEPAGE, EXCESS SETTLEMENT, AND DISPLACED STONE. THE AREA SHOULD BE INSPECTED FOR STRUCTURAL SOUNDNESS AND REPAIRED AS NEEDED.
6. REGULARLY INSPECT WATER DISCHARGED FROM TRAP FOR EXCESS SUSPENDED SEDIMENTS. IDENTIFY AND PERFORM NECESSARY REPAIRS TO IMPROVE WATER QUALITY. EXCESSIVE SUSPENDED SEDIMENTS MAY REQUIRE DESIGN MODIFICATIONS OR TREATMENT WITH FLOCCULANTS.
7. REMOVE WOODY VEGETATED GROWTH ON THE EMBANKMENT AND SPILLWAY AREAS.
8. REMOVE TRASH AND DEBRIS THAT ACCUMULATE IN THE POND AND HAVE POTENTIAL TO BLOCK SPILLWAYS.
9. DEWATERING OUTLETS SHALL BE REGULARLY CHECKED TO ENSURE THAT PERFORMANCE IS MAINTAINED. FILTER STONE CHOKED WITH SEDIMENT SHALL BE REMOVED AND REPLACED TO RESTORE ITS FLOW CAPACITY.
10. REMOVE SEDIMENT AND RESTORE THE SEDIMENT TRAP TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 40% OF THE SEDIMENT STORAGE DEPTH, OR THE DESIGN CLEANOUT ELEVATION. THIS ELEVATION SHALL BE SIGNIFIED BY THE TOP OF A STAKE NEAR THE CENTER OF THE TRAP. REMOVING SEDIMENT BY HAND MAY BE NECESSARY ADJACENT TO THE OUTLET SECTION OF THE EMBANKMENT TO PREVENT EQUIPMENT DAMAGE. PLACE THE REMOVED SEDIMENT AND STABILIZE WITH VEGETATION IN A DESIGNATED AREA WHERE IT WILL NOT EASILY ERODE AGAIN. RESTORE TRAP TO ITS ORIGINAL DIMENSIONS AND REPLACE STONE AS NEEDED ON THE OUTLET. BASIN SIDE SLOPES AND EMBANKMENTS SHALL BE PROTECTED FROM EROSION BY VEGETATION OF A DENSITY NOT LESS THAN 70%.
11. RISER PIPES: DEBRIS AND SEDIMENT SHOULD BE CLEANED FROM THE STRUCTURE AS NEEDED TO RESTORE DESIGN FLOW RATES. ALL JOINTS SHOULD BE INSPECTED TO INSURE WATER TIGHTNESS.
12. STONE SPILLWAYS: MAINTAIN FLOW OVER THE CENTER OF THE SPILLWAY, REPAIR DAMAGE CAUSED BY EROSION. DOWNSTREAM CHANNELS SHOULD BE INSPECTED FOR EROSION CONTROL DAMAGE. IF DAMAGE IS OCCURRING, AN ADDITIONAL STONE APRON WILL BE NEEDED. DEBRIS AND SEDIMENT SHOULD BE REMOVED AS NEEDED.
13. FOLLOWING MASS GRADING OPERATIONS AND AFTER ALL OTHER EARTH DISTURBANCE FOR THE CONSTRUCTION PROJECT IS COMPLETED, AND AFTER UPLAND AREAS HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENT TRAPS SHOULD BE DE-WATERED AND RE-GRADED SO AS TO CONFORM TO THE CONTOURS OF THE AREA. ALL TEMPORARY STRUCTURES SHOULD BE REMOVED AND THE AREA SEEDED, MULCHED AND STABILIZED AS NECESSARY.

BMP DECOMMISSIONING

SILT FENCE
- REMOVE SILT AND STABILIZE ON-SITE OR TRANSFER TO AN APPROVED OFF-SITE FACILITY.
- REMOVE AND TRANSPORT SILT FENCE MATERIALS TO AN APPROVED OFF-SITE FACILITY.
- RE-GRADE AND SEED DISTURBED AREAS.

SILT SOCK
- WHEN CONSTRUCTION IS COMPLETED ON SITE, THE FILTER SOCKS MAY BE CUT AND DISPERSED WITH THE LOADER, RAKE, BULLDOZER, OR OTHER DEVICE TO BE INCORPORATED INTO THE SOIL OR LEFT ON TOP OF THE THE SOIL FOR FINAL SEEDING. THE MESH NETTING MATERIAL WILL BE DISPOSED OF IN NORMAL TRASH CONTAINER OR REMOVED BY THE CONTRACTOR.

INLET PROTECTION
- REMOVE SILT AND STABILIZE ON-SITE OR TRANSFER TO AN APPROVED OFF-SITE FACILITY.

CONSTRUCTION ENTRANCE
- REMOVE SILT AND STABILIZE ON-SITE OR TRANSFER TO AN APPROVED OFF-SITE FACILITY.
- STONE SHALL BE REMOVED. CLEAN STONE MAY BE INCORPORATED IN SUBBASE FOR PAVED AREAS (AS SPECIFICATIONS ALLOW). STONE NOT RE-USED SHALL BE TRANSPORTED TO AN OFF-SITE FACILITY FOR DISPOSAL.
- RE-GRADE AND SEED DISTURBED AREAS.

PROCESS WATER/ LEACHATE MANAGEMENT
- ALL PROCESS WASTEWATERS (EQUIPMENT WASHING, LEACHATE ASSOCIATED WITH ON-SITE WASTE DISPOSAL, AND CONCRETE WASH-OUTS) WILL BE COLLECTED AND DISPOSED OF PROPERLY TO A PUBLICLY-OWNED TREATMENT WORKS.
- THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT ONLY AUTHORIZES THE DISCHARGE OF STORM WATER AND CERTAIN UNCONTAMINATED NON-STORM WATERS.
- THE DISCHARGE OF NON-STORM WATERS TO WATERS OF THE STATE MAY BE IN VIOLATION OF LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

DAVEY Resource Group
Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

HUNTINGTON PARK PHASE 4
SWPPP NOTES

PROJECT NUMBER	1966
DATE	2021-09-02

File: f:\tgc eng\projects\1966 huntington park conr\dwg\1966 notes and details.dwg Saved: 9/2/2021 12:05 PM (mc0177) Plotted: 9/2/2021 3:13 PM (mc0177) Plotstyle: (TGC 2019.ctb) Scale: (1:1) Page Setup: (34 BY 22)

EROSION AND SEDIMENT CONTROL

1. THE IMPLEMENTATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL CONFORM TO THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL, THE OHIO EPA'S NPDES PERMIT PROGRAM FOR THE DISCHARGE OF STORM WATER FROM CONSTRUCTION SITES. IF CONFLICTS EXIST REGARDING THE EROSION AND SEDIMENT CONTROL PRACTICES, THE MORE RESTRICTIVE SHALL APPLY.

2. EROSION AND SEDIMENT CONTROL PRACTICES NOT ALREADY SPECIFIED ON THIS PLAN MAY BE NECESSARY DUE TO UNFORESEEN ENVIRONMENTAL CONDITIONS AND/OR CHANGES IN DRAINAGE PATTERNS CAUSED BY EARTH-MOVING ACTIVITY. ADDITIONAL PRACTICES SHALL BE IMPLEMENTED AT THE DEVELOPER'S EXPENSE AS DIRECTED BY THE GOVERNING ENTITY WITH JURISDICTION.

3. THE DEVELOPER AND HIS/HER CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN. THEY SHALL ALSO BE RESPONSIBLE FOR MAKING ALL CONTRACTOR AND SUB-CONTRACTORS AWARE OF THE PROVISIONS OF THIS PLAN.

4. REPAIRS TO ANY EROSION AND SEDIMENT CONTROL MEASURES, STRUCTURES, DEVICES, OR RELATED ITEMS SHALL BE MADE WITHIN 24 HOURS OF THE INSPECTION.

5. SEDIMENT BASINS/TRAPS AND PERIMETER SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING FROM THE START OF CLEARING AND GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE PERMANENTLY STABILIZED.

6. STREAMS, INCLUDING BEDS AND BANKS, SHALL BE RESTABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED, INTERRUPTED, OR STOPPED.

OHIO ENVIRONMENTAL PROTECTION AGENCY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOTES

1. THIS CONTRACT DRAWING SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST.

2. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.50" OF RAIN PER 24-HOUR PERIOD. PERMANENT RECORDS OF MAINTENANCE AND INSPECTION MUST BE MAINTAINED FOR 2 YEARS AFTER THE NOTICE OF INTENT (NOI) PER THE OHIO EPA NPDES PERMIT AND SHOULD INCLUDE THE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, CERTIFICATION OF COMPLIANCE, AND CORRECTIVE MEASURES TAKEN.

3. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF. SOLID, SANITARY AND TOXIC WASTE MUST BE DISPOSED OF IN A PROPER MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. IT IS PROHIBITED TO BURN, BURY OR POUR OUT ONTO THE GROUND OR INTO THE STORM SEWERS ANY SOLVENTS, PAINTS, STAINS, GASOLINES, DIESEL FUEL, USED MOTOR OIL, HYDRAULIC FLUID, ANTIFREEZE, CEMENT CURING COMPOUNDS, AND OTHER SUCH TOXIC AND HAZARDOUS WASTES. WASH OUT OF CEMENT TRUCKS SHOULD OCCUR IN A DIKED, DESIGNATED AREA WHERE THE WASHINGS CAN COLLECT AND BE DISPOSED OF PROPERLY WHEN THEY HARDEN. STORAGE TANKS SHOULD BE LOCATED IN DIKED AREAS AWAY FROM ANY DRAINAGE CHANNELS. THE DIKED AREA SHOULD HOLD A VOLUME 110% OF THE LARGEST TANK.

4. THE DEVELOPER SHALL ENSURE A NOTICE OF TERMINATION (NOT) IS FILED PER THE OHIO EPA NPDES PERMIT REQUIREMENTS.

VEGETATION STABILIZATION REQUIREMENTS

1. VEGETATION STABILIZATION IS THE MOST EFFECTIVE TYPE OF EROSION CONTROL PRACTICE. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO ESTABLISH VEGETATION ON EXCAVATED AREAS AS DIRECTED BY THE GOVERNING ENTITY WITH JURISDICTION.

2. DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR A PERIOD OF 4 DAYS OR GREATER SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROPRIATE MEANS WITHIN SEVEN DAYS AFTER THE LAST DISTURBANCE.

3. FOR AREAS WITHIN 50 FEET OF ANY STREAM, SOIL STABILIZATION SHALL BE INITIATED IMMEDIATELY ON ALL INACTIVE, DISTURBED AREAS.

4. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS IMMEDIATELY AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

5. THE DEVELOPER IS REQUIRED TO ESTABLISH A VEGETATIVE COVER WHICH ACHIEVES AT LEAST 70% COVER OF UNIFORM DENSITY TO THE SATISFACTION OF GOVERNING ENTITY WITH JURISDICTION.

6. PRIOR TO SEEDING, SOIL TESTS SHOULD BE DONE TO DETERMINE NEED FOR LIME AND FERTILIZER APPLICATION. IN LIEU OF SOIL TESTS, LIME SHALL BE APPLIED AT 100 LB./1,000 FT2 OR 2 TONS/ACRE AND FERTILIZER SHALL BE APPLIED AT 12 LB/1,000 FT2 OF 10-10-10 OR 12-12-12 ANALYSIS. THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL A DEPTH OF 3 INCHES.

7. NO SEED SHALL BE PLANTED FROM OCTOBER 1 THROUGH NOVEMBER 20. DURING THIS PERIOD THE SEEDS ARE LIKELY TO GERMINATE BUT PROBABLY WILL NOT BE ABLE TO SURVIVE THE WINTER.

8. STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. POSSIBLE ANCHORING METHODS ARE AS FOLLOWS:

   1. MECHANICAL DISK
   2. MULCH NETTING
   3. ASPHALT EMULSION
   4. SYNTHETIC BINDERS
   5. WOOD-CELLULOSE

DESCRIPTION	DATES	RECOMMENDED APPLICATION RATE (OR EQUIVALENT) AS SPECIFIED IN RAINWATER & LAND DEVELOPMENT		
PERMANENT SEEDING	MARCH 1 - SEPT 30	GENERAL USE	MIX OF — CREEPING RED FESCUE@20-40 LB/AC; DOMESTIC RYEGRASS @ 10-20 LB/AC; KENTUCKY BLUEGRASS @ 10-20 LB/AC	
		STEEP BANKS	TALL FESCUE @ 40LB/AC	
		ROAD DITCHES		
TEMPORARY SEEDING	MARCH 1 - SEPT 30	MIX OF — PERENNIAL RYEGRASS @40 LB/AC; TALL FESCUE @ 40 LB/AC; ANNUAL RYEGRASS @ 40 LB/AC		
DORMANT SEEDING	OCT 1 - NOV 20	PREPARE SEEDBED, ADD LIME & FERTILIZER, THEN MULCH. FROM NOV 21 THROUGH MARCH 15, APPLY THE SELECTED SEED MIXTURE AT A 50% INCREASE IN RATE		
	NOV 20 - MARCH 15	PREPARE SEEDED ADD LIME & FERTILIZER, APPLY THE SELECTED SEED MIXTURE AT A 50% INCREASE IN RATE, THEN MULCH		
MULCH	ANYTIME OF THE YEAR	STRAW		2 TONS/AC. OR 90 LB/1000FT
		HYDROSEED (WOOD CELLULOSE FIBER)		1 TON/AC. OR 46 LB/1000FT

THESE SPECIFICATIONS HAVE BEEN ADAPTED FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES' BOOKLET, RAINWATER AND LAND DEVELOPMENT, STANDARDS FOR STORMWATER MANAGEMENT, LAND DEVELOPMENT, AND URBAN STREAM PROTECTION

SPECIFICATIONS FOR SILT FENCE (SF)

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

2. 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.

3. 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.

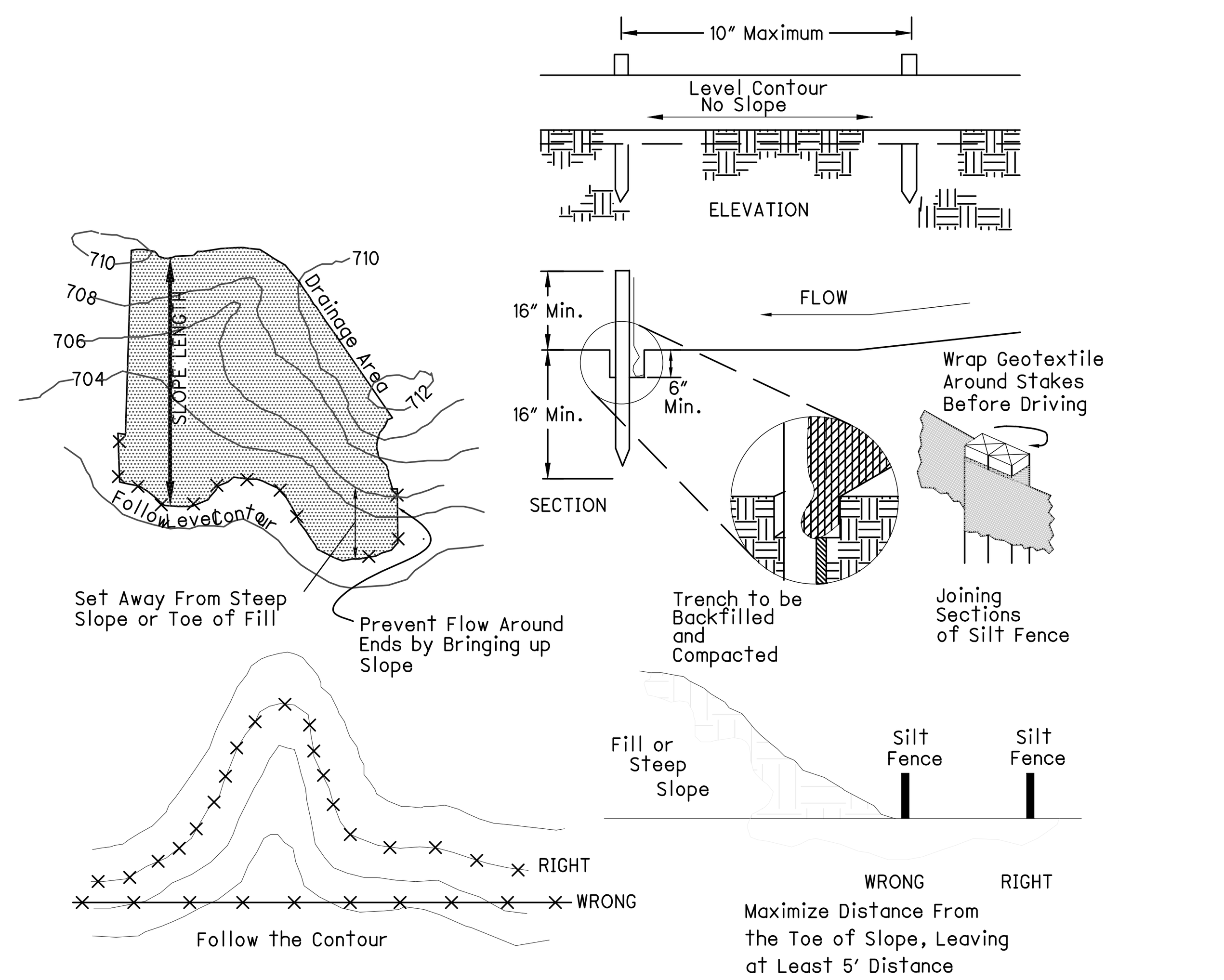
4. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.

5. THE SILT FENCE SHALL BE PLACED SO THAT 8 INCHES OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH DEEP TRENCH AND THE TRENCH SHALL BE BACKFILLED AND COMPACTED.

6. MAINTENANCE - 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: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

7. FENCE POSTS SHALL BE A MINIMUM OF 32 INCHES IN LENGTH MADE OF 2-BY-2 INCH HARDWOOD OF SOUND QUALITY.

8. SILT FENCE FABRIC SHALL BE ODOT TYPE C GEOTEXTILE FABRIC OR EQUIVALENT.



SPECIFICATIONS FOR INLET BASIN PROTECTION (YARD INLET BASINS)

1. INLET BASIN PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.

2. THE EARTH AROUND THE INLET BASIN SHALL BE EXCAVATED COMPLETELY TO A DEPTH OF 18 INCHES.

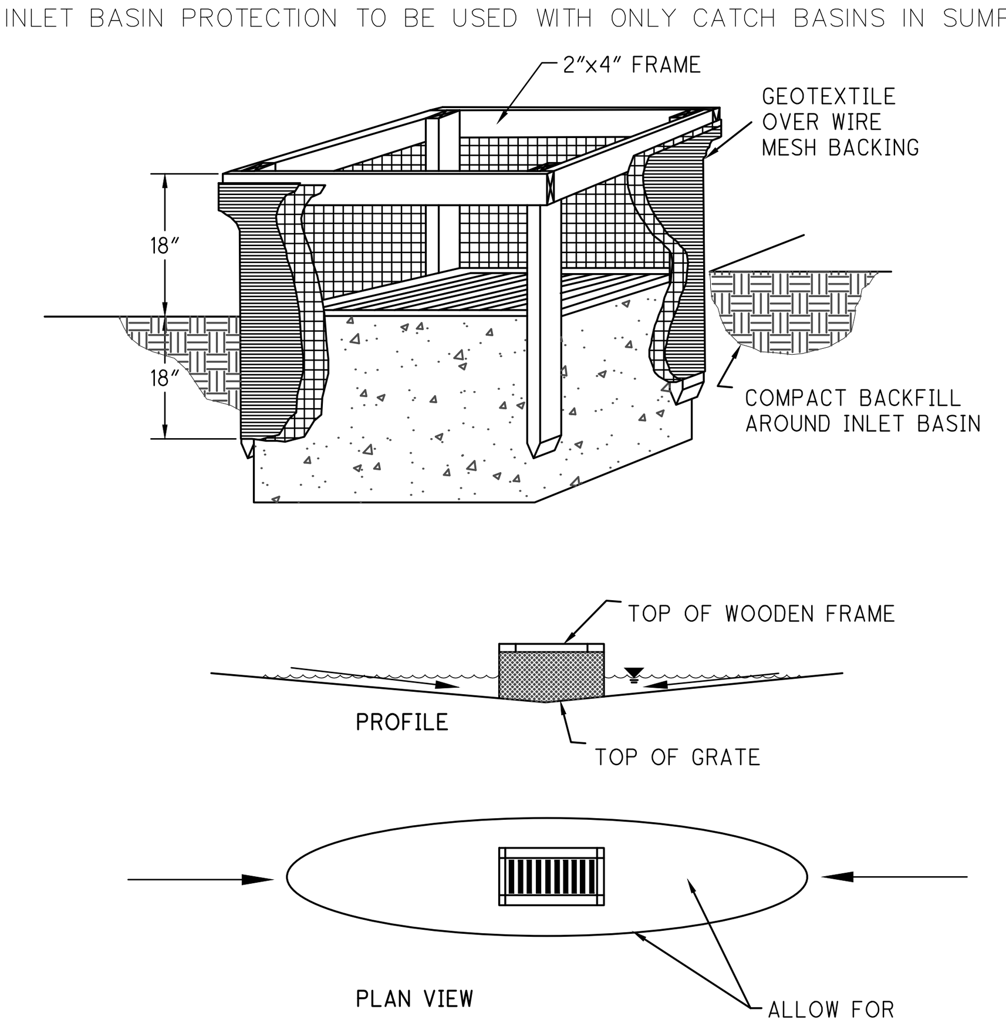
3. THE TOP OF THE FRAME AS SHOWN SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

4. GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. THE FABRIC AND WIRE MESH SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY.

5. BACKFILL SHALL BE PLACED AROUND THE INLET BASIN IN COMPACTED 6 INCH LAYERS UNTIL THE EARTH IS EVEN WITH THE TOP OF THE CATCH BASIN GRATE.

6. A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET BASIN IF THE INLET BASIN IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET BASIN WILL NOT FLOW TO A SETTLING POND. THE TOP OF THE EARTH DIKE SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

7. INLET BASIN PROTECTION TO BE USED WITH ONLY CATCH BASINS IN SUMP AREAS.



SPECIFICATIONS FOR SEDIMENT TRAP (< 10 AC. WATERSHED)

1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS NEEDED TO FACILITATE SEDIMENT CLEANOUT.

2. FILL MATERIAL USED FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF THE EMBANKMENT SHALL BE 5 FEET AS MEASURED FROM THE SURROUNDING GROUND.

3. DIKES DIRECTING WATER TO THE TRAP SHALL BE HIGHER THAN THE HEIGHT OF THE EMBANKMENT.

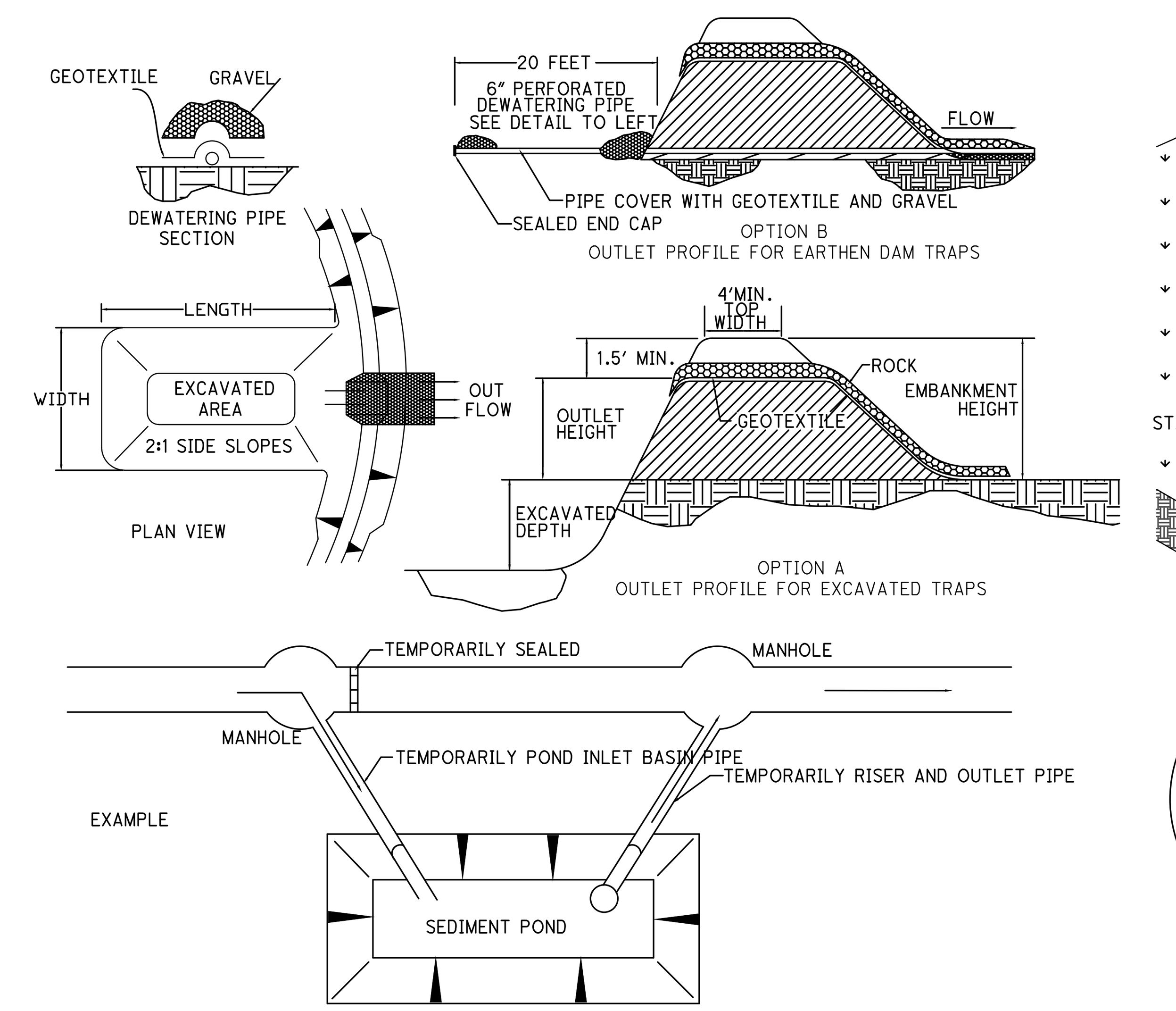
4. TEMPORARY SEEDING SHALL BE ESTABLISHED ON ALL NONSUBMERGED AREAS OF THE SEDIMENT TRAP.

5. THE STORAGE VOLUME AND OUTLET SPILLWAY SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN IN THE PLANS.

6. GEOTEXTILE SHALL BE PLACED OVER THE BOTTOM AND SLOPES OF THE OUTLET SPILLWAY AND SHALL CONTINUE DOWNSTREAM OF THE EMBANKMENT TO FORM AN APRON ON THE SURROUNDING GROUND. TO PREVENT RUNOFF FROM FLOWING UNDER THE GEOTEXTILE, THE SECTIONS PLACED NEAREST THE FRONT SHALL OVERLAP FOLLOWING SECTIONS AT LEAST 2 FEET.

7. ROCK USED IN THE OUTLET SPILLWAY SHALL BE PLACED 1 FOOT THICK ON THE GEOTEXTILE. THE ROCK SHALL BE BETWEEN TYPE C AND TYPE D ROCK WHERE D_{50} IS ABOUT 8 INCHES.

8. SEDIMENT SHALL BE REMOVED AND THE SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS FILLED ONE-HALF THE POND'S ORIGINAL DEPTH. REMOVED SEDIMENT SHALL BE SPREAD IN A SUITABLE AREA AND STABILIZED SO IT WILL NOT ERODE.



SPECIFICATIONS FOR CURB INLET PROTECTION

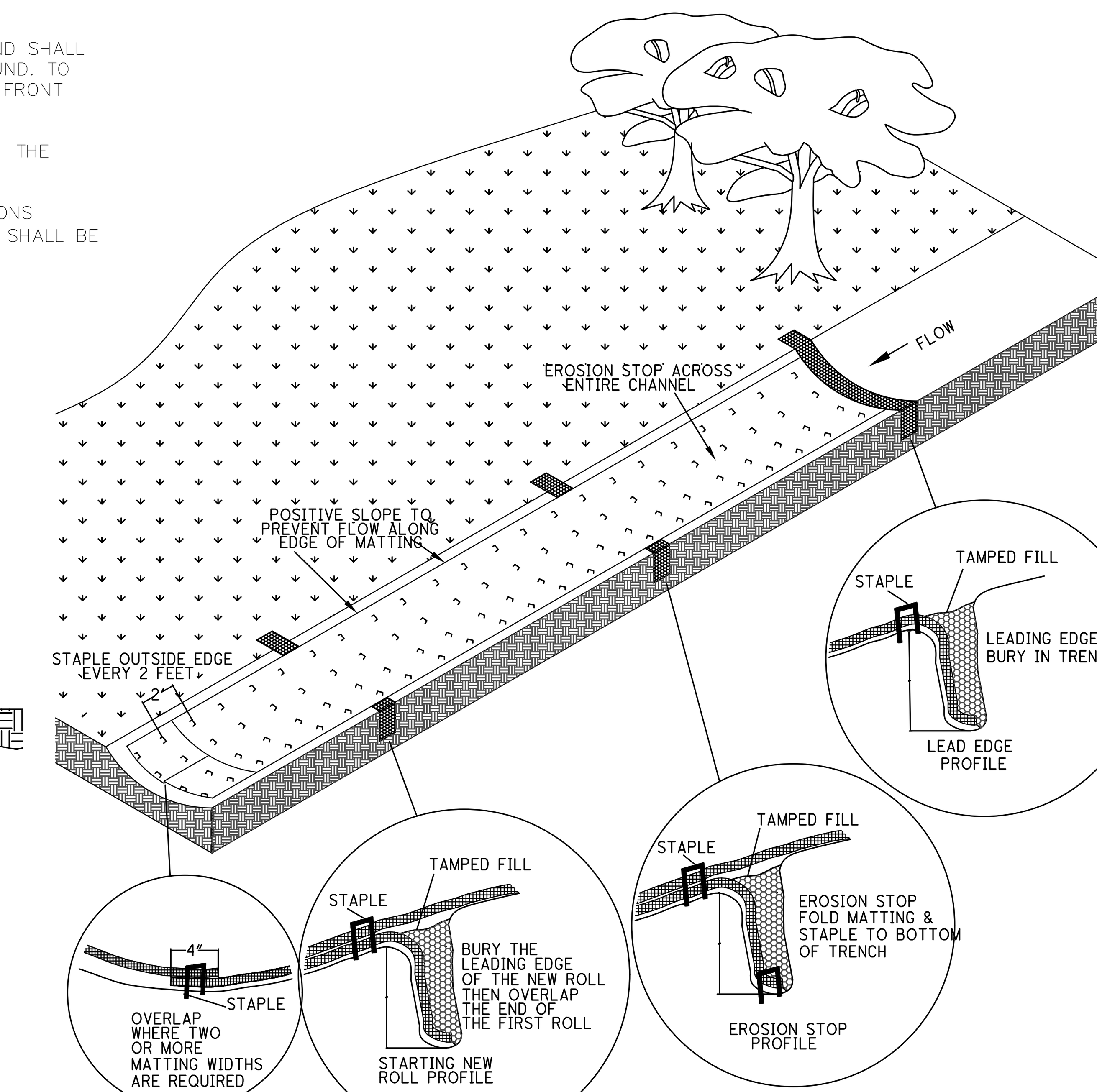
SPECIFICATIONS FOR EROSION CONTROL MATTING

MATTING IN CHANNELS INSTALLATION

1. SITE PREPARATION AFTER THE SITE HAS BEEN SHAPED AND GRADED, A SEEDBED SHALL BE PREPARED THAT IS RELATIVELY FREE OF FOREIGN MATERIAL, CLODS OR ROCKS THAT ARE GREATER THAN 1.5" IN DIAMETER. THE SITE SHALL BE PREPARED TO ENSURE THAT THE MATTING HAS GOOD SOIL CONTACT AND THAT THE MATTING WILL NOT "BRIDGE" OR "TENT".

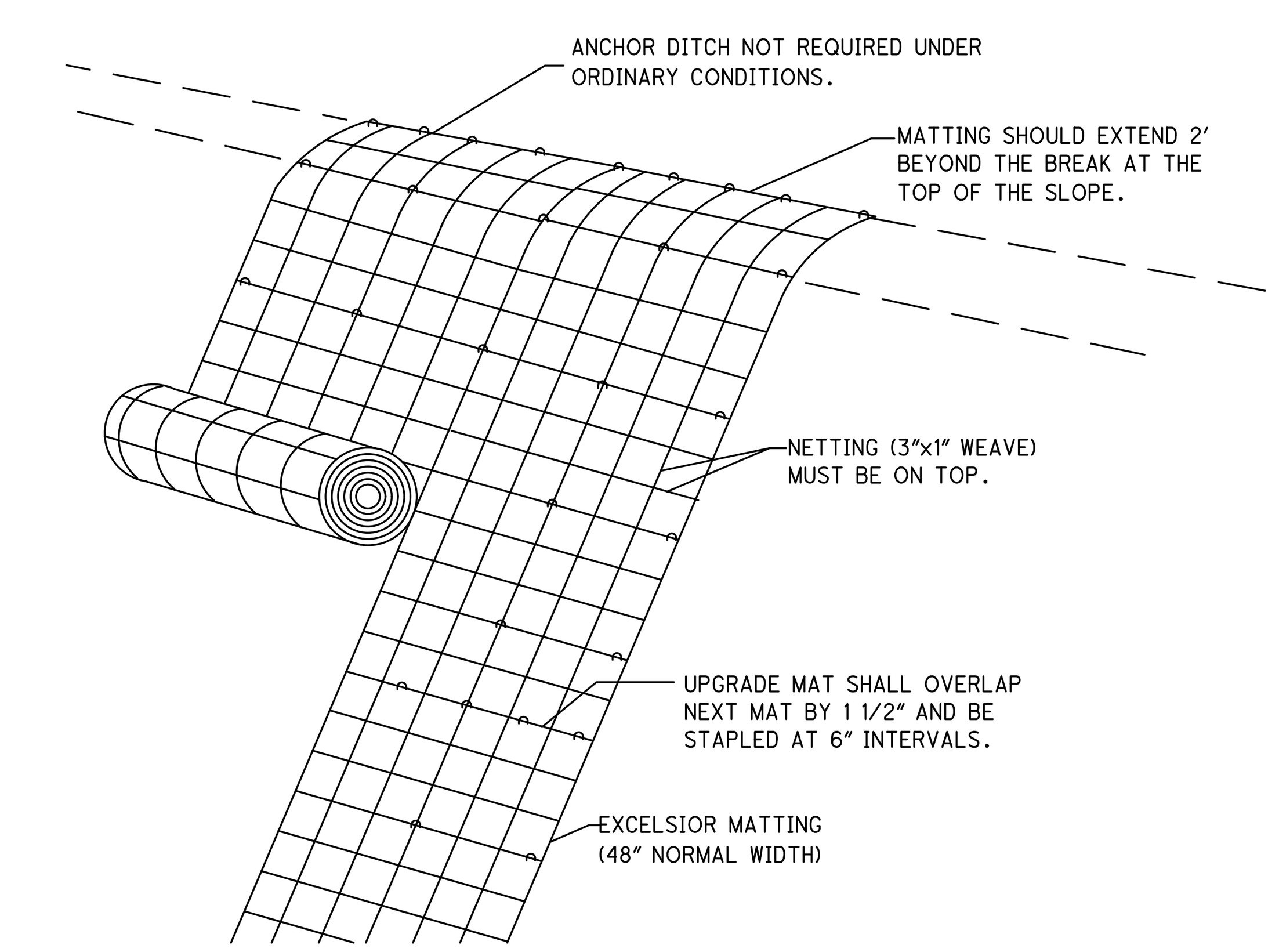
2. PREPARE THE SEEDBED AND SEED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS; OR, FOR EXCELSIOR MATTING, SEED AREA TO BE PROTECTED BEFORE INSTALLATION; OR, WHEN USING JUTE MATTING, APPLY HALF THE SEED BEFORE AND HALF THE SEED AFTER INSTALLATION.

3. MATTING SHALL BE INSTALLED AS SPECIFIED BY THE MANUFACTURER AS APPROPRIATE FOR SITE CONDITIONS.



MATTING ON SLOPES INSTALLATION

1. ON STEEP SLOPES APPLY MATTING BY BACKING DOWN HILL KEEPING EDGE OVERLAPPING ADJACENT MAT BY 1 1/2". ON SHORT GRADUAL SLOPES THE MATTING MAY BE APPLIED HORIZONTALLY.
2. EXCELSIOR MATTING IS ITS OWN MULCH AND NO EXTRA VEGETATIVE MULCH MATERIAL IS REQUIRED.

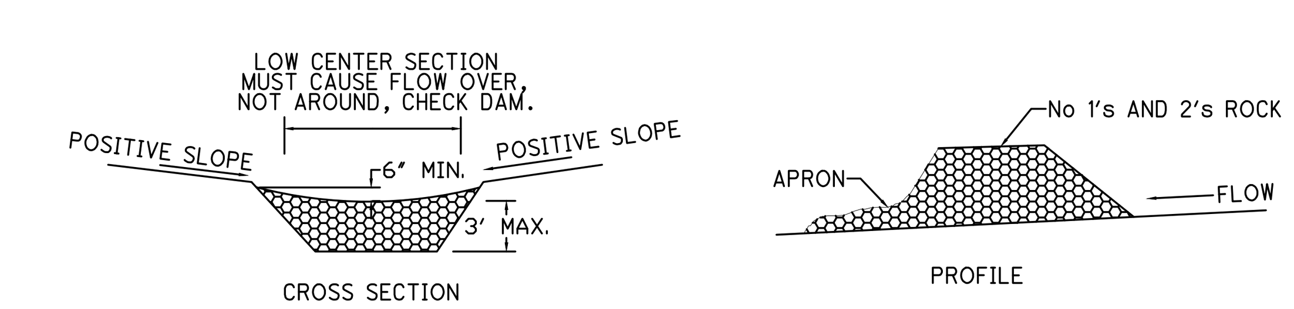


SPECIFICATIONS FOR CHECK DAMS

1. THE CHECK DAM SHALL BE CONSTRUCTED OF No. 1'S AND 2'S STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL.

2. THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER OF THE WEIR SHALL NOT EXCEED 3 FEET.

3. SPACING BETWEEN THE DAMS SHALL BE AS SHOWN IN THE PLANS.



Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

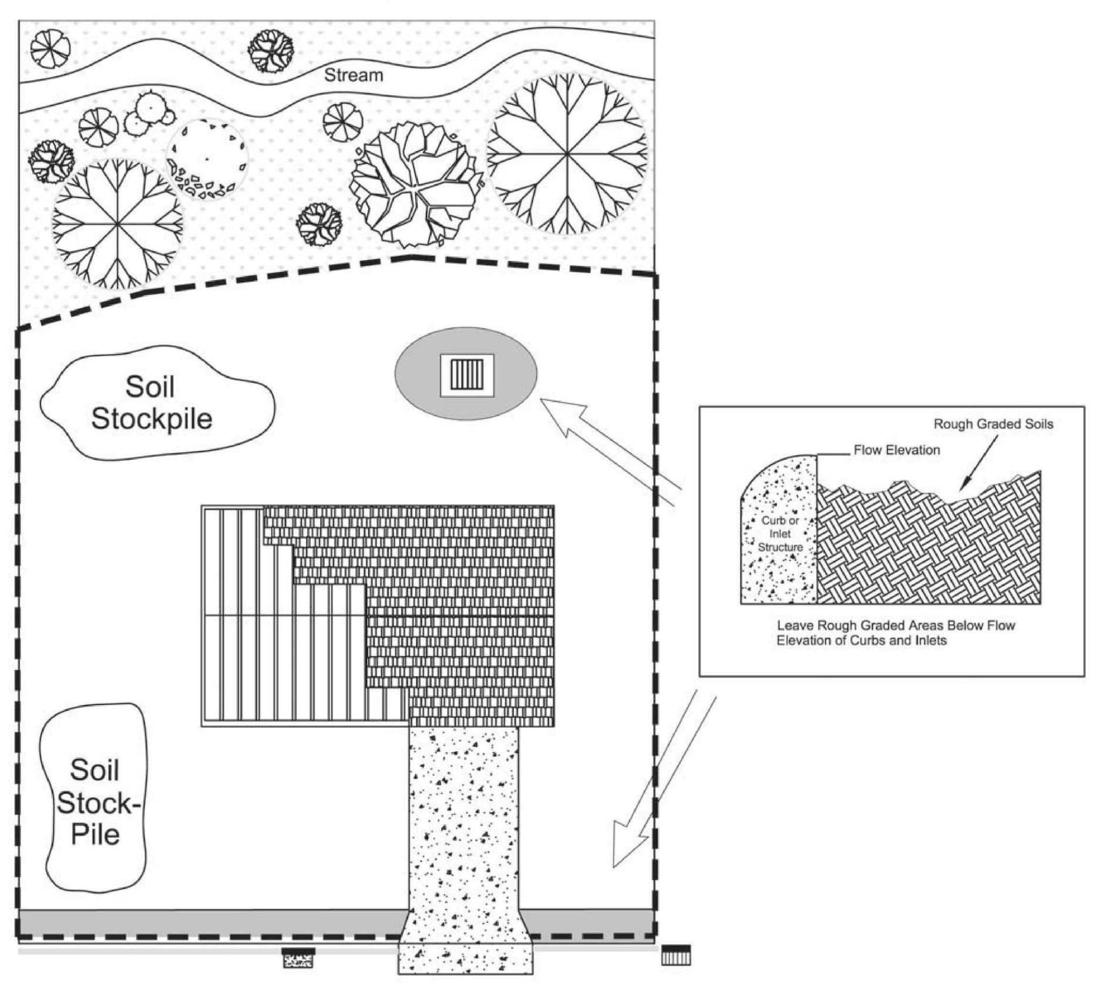
HUNTINGTON PARK PHASE 4

SWPPP NOTES & DETAILS

PROJECT NUMBER	1966
DATE	2021-09-02

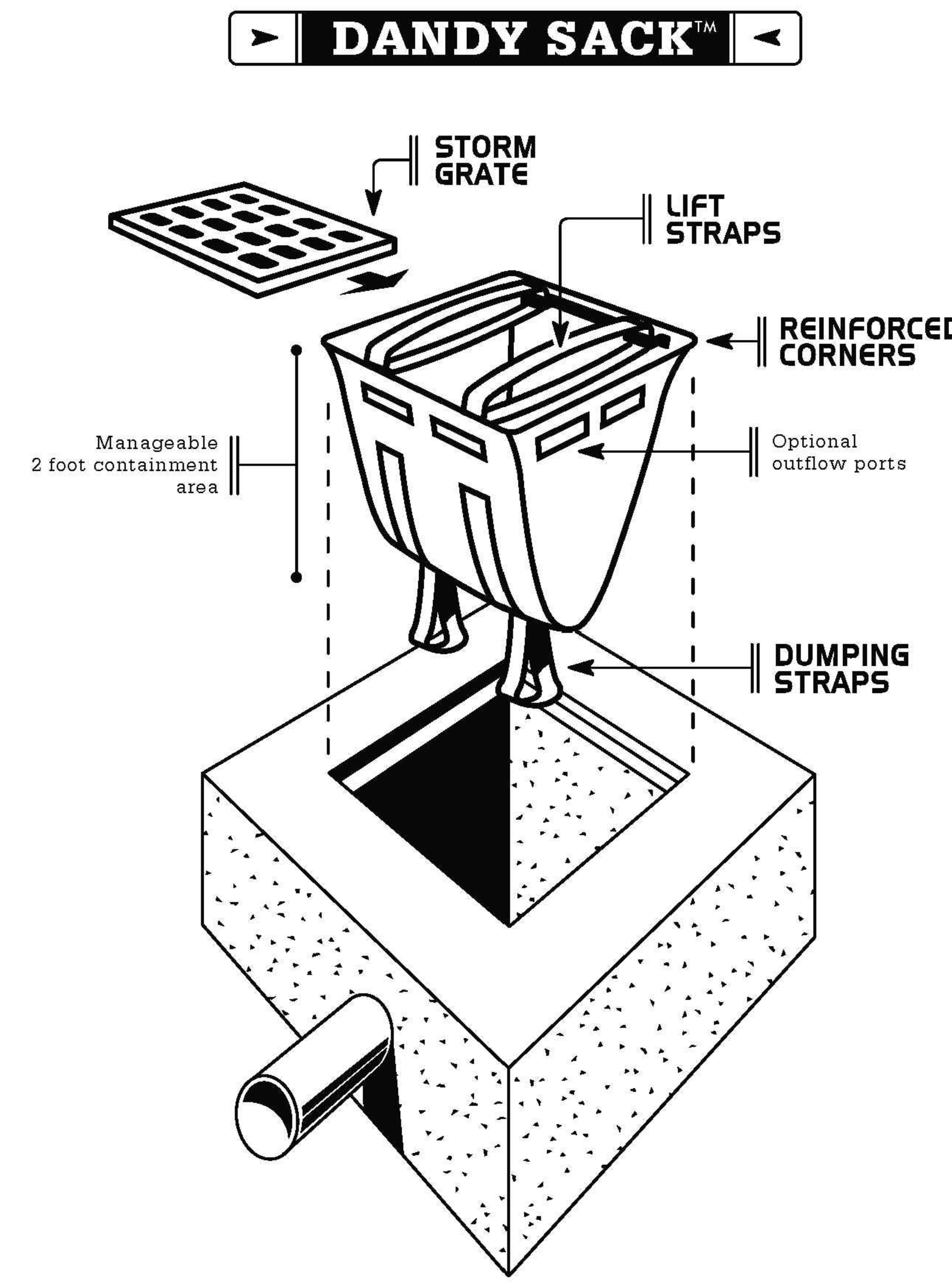
Specifications
for

Small Construction Site Controls



PLAN VIEW

- Temporary seeding and/or mulch applied to rough graded areas
- Construction Entrance gravel
- Rough grade areas to allow settling below grade elevation
- Storm Drain w/inlet protection
- Storm Drain without inlet protection
- Yard Drain w/ inlet protection
- Silt Fence (OR 12" FILTER SOCK WITH COMPOST FILL)
- Curb



Specifications
for

Dust Control

1. Vegetative Cover and/mulch – Apply temporary or permanent seeding and mulch to areas that will remain idle for over 21 days. Saving existing trees and large shrubs will also reduce soil and air movement across disturbed areas. See Temporary Seeding; Permanent Seeding; Mulching Practices; and Tree and Natural Area Protection practices.
2. Watering – Spray 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 shall be utilized according to manufacturers instructions.
3. Spray-On Adhesives – Apply adhesive according to the following table or manufacturers' instructions.

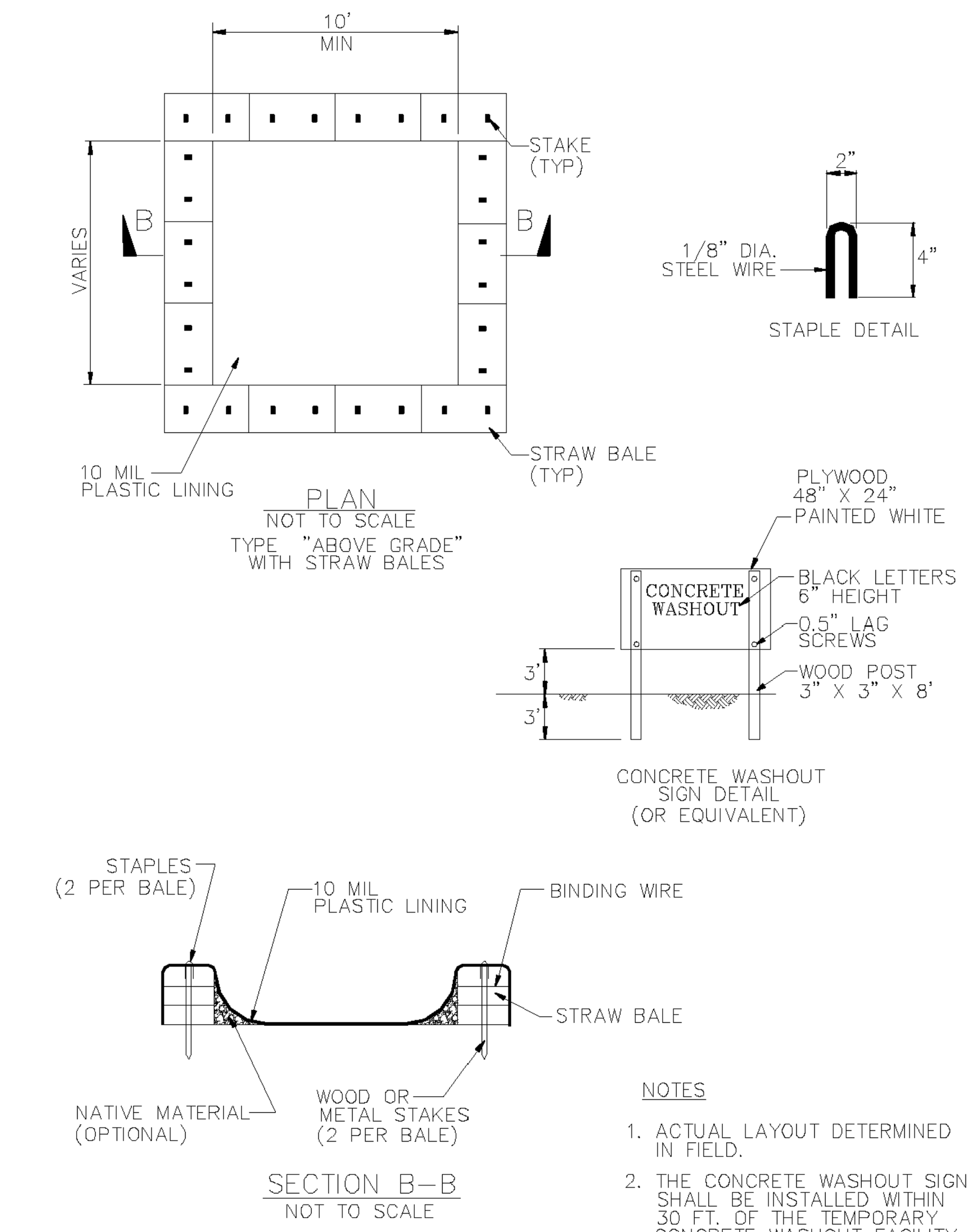
Table 7.5.1 Adhesives for Dust Control

Adhesive	Water Dilution (Adhesive: Water)	Nozzle Type	Application Rate Gal./Ac.
Latex Emulsion	12.5:1	Fine	235
Resin in Water Acrylic Emulsion (No-traffic)	4:1	Fine	300
Acrylic Emulsion (No-traffic)	7:1	Coarse	450
Acrylic Emulsion (Traffic)	3.5:1	Coarse	350

4. Stone – Graded roadways and other suitable areas will 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.
5. Barriers – Existing windbreak vegetation shall be marked and preserved. Snow fencing or other suitable barrier may be placed perpendicular to prevailing air currents at intervals of about 15 times the barrier height to control air currents and blowing soil.
6. Calcium Chloride - This chemical may be applied by mechanical spreader as loose, dry granules or flakes at a rate that keeps the surface moist but not so high as to cause water pollution or plant damage. Application rates should be strictly in accordance with suppliers' specified rates.
7. Operation and Maintenance - When Temporary Dust Control measures are used; repetitive treatment should be applied as needed to accomplish control.

Street Cleaning - 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.

Concrete Waste Management WM-8



NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Specifications
for

Turf Reinforcement Matting

1. Channel/Slope Soil Preparation Grade and compact area of installation, preparing seedbed by loosening 2"-3" of topsoil above final grade. Incorporate amendments such as lime and fertilizer into soil. Remove all rocks, clods, vegetation or other debris so that installed TRM will have direct contact with the soil surface.
2. Channel/Slope Seeding Apply seed to soil surface prior to installation. All check slots, anchor trenches, and other disturbed areas must be reseeded. Refer to the Permanent Seeding specification for seeding recommendations.

Slope Installation

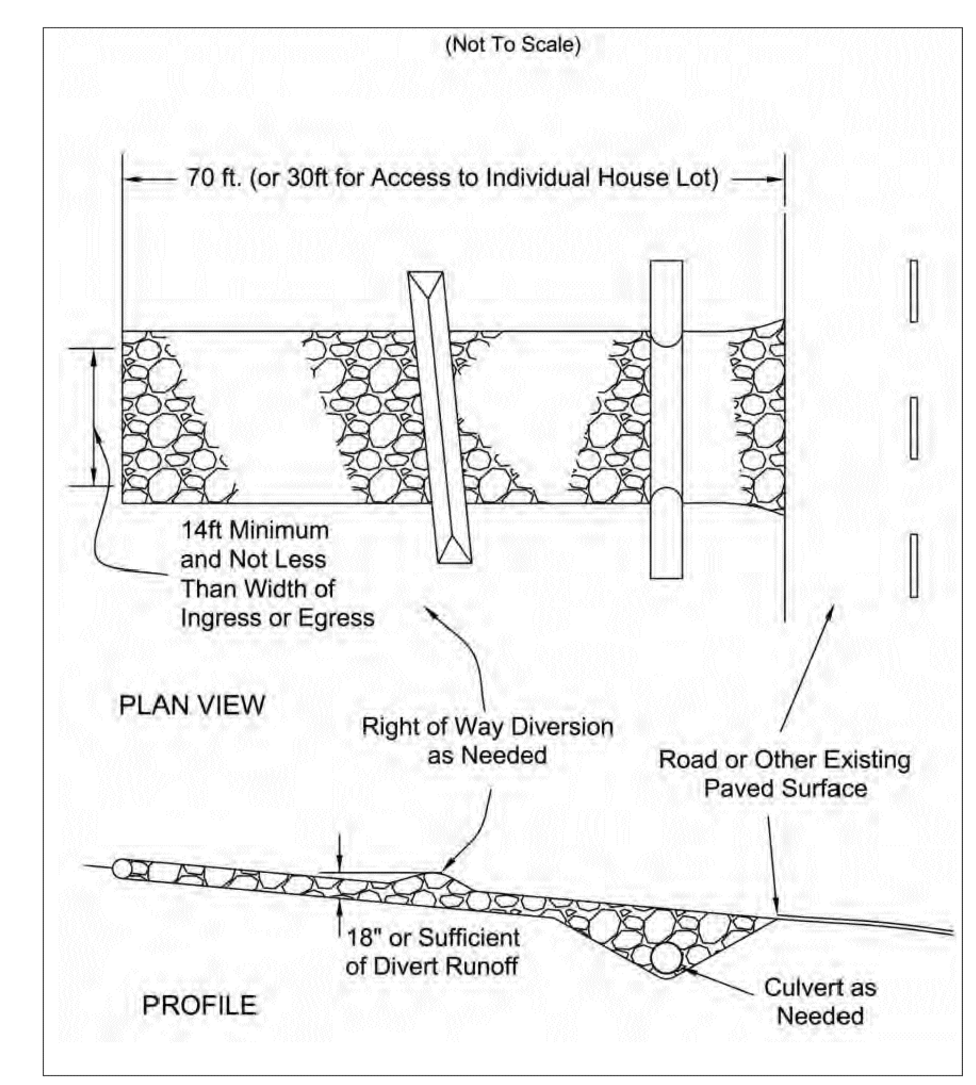
3. Excavate top and bottom trenches (12"x6"). Intermittent erosion check slots (6"x6") may be required based on slope length. Excavate top anchor trench 2' x 3' over crest of the slope.
4. If intermittent erosion check slots are required install TRM in 6"x6" slot at a maximum of 30' centers or the mid point of the slope. TRM should be stapled into trench on 12" centers.
5. Install TRM in top anchor trench, anchor on 12" spacings, backfill and compact soil.
6. Unroll TRM down slope with adjacent rolls overlapped a minimum of 3". Anchor the seam every 18". Lay the TRM loose to maintain direct soil contact, do not pull taught.
7. Overlap roll ends a minimum of 12" with upslope TRM on top for a shingle effect. Begin all new rolls in an erosion check slot if required, double anchor across roll every 12".
8. Install TRM in bottom anchor trench (12"x6"), anchor every 12". Place all other staples throughout slope at 1 to 2.5 per square yard dependant on slope. Refer to manufacturer's anchor guide.

Channel Installation

9. Excavate initial anchor trench (12"x6") across the lower end of the project area.
10. Excavate intermittent check slots (6"x6") across the channel at 30' intervals along the channel.
11. Excavate longitudinal channel anchor slots (4"x4") along both sides of the channel to bury the edges. Whenever possible extend the TRM 2'-3' above the crest of channel side slopes.
12. Install TRM in initial anchor trench (downstream) anchor every 12", backfill and compact soil.
13. Roll out TRM beginning in the center of the channel toward the intermittent check slot. Do not pull taught. Unroll adjacent rolls upstream with a 3" minimum overlap (anchor every 18") and up each channel side slope.
14. At top of channel side slopes install TRM in the longitudinal anchor slots, anchor every 18".
15. Install TRM in intermittent check slots. Lay into trench and secure with anchors every 12", backfill with soil and compact.
16. Overlap roll ends a minimum of 12" with upstream TRM on top for a shingling effect. Begin all new rolls in an intermittent check slot, double anchored every 12".
17. Install upstream end in a terminal anchor trench (12"x6"); anchor every 12", backfill and compact.
18. Complete anchoring throughout channel at 2.5 per square yard using suitable ground anchoring devices (U shaped wire staples, metal geotextile pins, plastic stakes, and triangular wooden stakes). Anchors should be of sufficient length to resist pullout. Longer anchors may be required in loose sandy or gravelly soils.

Specifications
for

Construction Entrance



Specifications
for

Construction Entrance

1. Stone Size—ODOT # 2 (1.5-2.5 inch) stone shall be used, or recycled concrete equivalent.
2. Length—The Construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single residence lots).
3. Thickness -The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.
4. Width -The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.
5. Geotextile -A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot-proof polymeric fibers and meet the following specifications:

Figure 7.4.1

Geotextile Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permittivity	1×10-3 cm/sec.

6. Timing—The construction entrance shall be installed as soon as is practicable before major grading activities.
7. Culvert -A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surfaces.
8. 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.
9. 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 scraping or sweeping.
10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.
11. Removal—the entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

HUNTINGTON PARK PHASE 4

SWPPP NOTES & DETAILS

PROJECT NUMBER: 1966

DATE: 2021-09-02

SWP3 Amendment Log

Project Name:

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared By

SWP3 Grading and Stabilization Activities Log

Project Name:

Date Grading Activity Initiated	Description of Grading Activity	Date Grading Activity Ceased Indicate temporary or permanent	Data When Stabilization Measures are Initiated	Description of Stabilization Measure and Location

Corrective Action Log

Project Name:

Inspection Date	Inspector Name	Description of Corrective Action Needed (From Inspection Report)	Corrective Action Taken	Date Action Taken

SWP3 Inspection Report Log

Project Name:

Inspection #	Name of Inspector	Date of Inspection	Rain Event	Type of Corrective Action Required
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Davey Resource Group
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
(PHONE) 330.590.8004 (FAX) 888.820.8423

HUNTINGTON PARK PHASE 4

SWPPP LOGS

PROJECT NUMBER 1966

DATE 2021-09-02