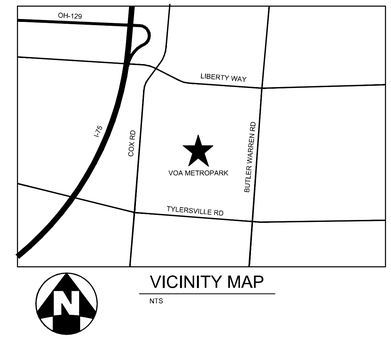
VOA METROPARK FIELD HOUSE

7850 VOA PARK DR., WEST CHESER, OHIO 45069

SHP
LEADING DESIGN



VICINITY MAP
NTS

SHEET INDEX

CIVIL

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250 Civic Center Drive, Suite 200, Columbus, Ohio 43215, 614-223-2124
223 Fairfield Avenue, Suite 1, Bellevue, Kentucky 41073, 859-360-1234

CONGER CONSTRUCTION GROUP

FIELD HOUSE
VOA METROPARK FIELD HOUSE
7850 VOA PARK DR., WEST CHESER, OHIO 45069

METROPARKS OF BUTLER COUNTY
2051 TIMBERMAN RD. HAMILTON, OH 45013

ISSUANCES

1	06.02.17	BID AND PERMIT SET
2	08.14.17	BID AND PERMIT SET REV

TITLE SHEET

DATE 06/02/17

COMM NO. 2014000.00

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GENERAL NOTES

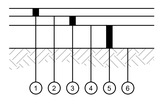
1. BUTLER COUNTY, AND THE CURRENT EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (ODOT CMS), INCLUDING ALL SUPPLEMENTS, SHALL GOVERN ALL MATERIALS AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THIS PLAN. IGNORE REFERENCES TO MEASUREMENT AND PAYMENT IN THE ODOT CMS UNLESS NOTED OTHERWISE, IN THE CASE OF CONFLICTS BETWEEN THE ODOT CMS AND BUTLER COUNTY REQUIREMENTS, THE BUTLER COUNTY REQUIREMENTS SHALL PREVAIL.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL CALL, TOLL FREE, THE OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) 48 HOURS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ALL UTILITY COMPANIES WHO ARE NON-MEMBERS OF THE OHIO UTILITIES PROTECTION SERVICE AT LEAST 48 HOURS PRIOR TO WORK IN THE VICINITY OF THEIR UNDERGROUND LINES.
3. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
4. THE CONTRACTOR IS TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE OHIO EPA FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNERS REPRESENTATIVE WITH WRITTEN REPORTS.
5. THE CONTRACTOR IS REQUIRED TO VISIT THE SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING THE SCOPE OF THE WORK. FAILURE TO VISIT THE SITE SHALL NOT RELIEVE HIM FROM ANY RESPONSIBILITY IN THE PERFORMANCE OF THE CONTRACT.
6. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR EXPENSES INCURRED DUE TO SOIL CONDITIONS, GROUNDWATER, AND/OR ROCK EXCAVATION, ALL OF THESE ITEMS SHALL BE INCLUDED IN THE PRICE BID FOR THE PROJECT.
7. THE COST OF ALL DEWATERING REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE INCLUDED IN THE PRICE BID FOR THE PROJECT.
8. THE DIRECT OR INDIRECT DISCHARGE OR PUMPING OF UNFILTERED SEDIMENT-LADEN WATER INTO THE STORM DRAINAGE SYSTEM OR WATERCOURSE IS ILLEGAL AND PROHIBITED.
9. ANY WELL, WELL POINT, PIT, OR OTHER DEVICE INSTALLED FOR THE PURPOSE OF LOWERING THE GROUND WATER TO FACILITATE CONSTRUCTION OF THIS PROJECT SHALL BE PROPERLY ABANDONED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 3745-9-10 OF THE OHIO ADMINISTRATIVE CODE OR IN ACCORDANCE WITH THE PROVISIONS OF THIS PLAN AS DIRECTED BY THE DIRECTOR OF PUBLIC UTILITIES OR HIS REPRESENTATIVE.
10. ANY CONTRACTOR INSTALLING ANY WELL, WELL POINT, PIT, OR OTHER DEVICE USED FOR THE PURPOSE OF REMOVING GROUND WATER FROM AN AQUIFER SHALL COMPLETE AND FILE A WELL LOG AND DRILLING REPORT FORM WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), DIVISION OF WATER, WITHIN 30 DAYS OF THE WELL COMPLETION IN ACCORDANCE WITH THE OHIO REVISED CODE SECTION 1521.01 AND 1524.05 IN ADDITION, ANY SUCH FACILITY IS COMPLETED IN ACCORDANCE WITH SECTION 1521.18 OF THE OHIO REVISED CODE. FOR COPIES OF THE NECESSARY WELL LOG, DRILLING REPORT, OR REGISTRATION FORMS, PLEASE CONTACT: DIVISION OF WATER, OHIO DEPARTMENT OF NATURAL RESOURCES, FOUNTAIN SQUARE, COLUMBUS, OHIO 43224, (614)265-6717.
11. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO THE ODNR FOR THE REGISTRY, MAINTENANCE AND ABANDONMENT OF ANY WITHDRAWAL DEVICE USED IN CONSTRUCTION OF THIS PROJECT.
12. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT AND/OR FACE OF CURB, UNLESS OTHERWISE NOTED.
13. ALL SITE SIGNAGE, STRIPING COLOR AND WIDTH SHALL BE PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
14. ALL EXISTING PAVEMENTS, WALKS, CURBS, ETC. SHALL BE SAWCUT BEFORE REMOVAL. IF, DURING CONSTRUCTION, THE PAVEMENT, WALKWAY, CURB, ETC. IS DAMAGED BEYOND THE ORIGINAL SAWCUT, THE DAMAGED AREA SHALL BE RECUT TO NEAT LINES AS DIRECTED BY THE ENGINEER. PAYMENT FOR SAWCUTTING SHALL BE INCLUDED IN THE PRICE BID FOR THE PROJECT.
15. THE CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT TO PROVIDE A SMOOTH VERTICAL FULL DEPTH BUTT JOINT BETWEEN THE EXISTING PAVEMENT OR CURB AND THE PROPOSED PAVEMENT. CONTRACTOR SHALL LOCATE SOUND PAVEMENT EDGE AND CUT AND TRIM PAVEMENT TO A NEAT LINE. INCLUDE THE COST OF PAVEMENT REMOVAL AND DISPOSAL IN THE PRICE BID FOR THE PROJECT.

GRADING NOTES

1. CONTRACTOR TO REMOVE TREES AND CLEAR AREAS AS NECESSARY TO PERFORM ALL SITE WORK INCLUDING GRADING AND UTILITY WORK.
2. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
3. ALL ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.
4. SITE BUILDING PAD EXCAVATION AND CONSTRUCTION TO BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. BUILDING PAD PREPARATION SHALL BEGIN BY CLEARING & STRIPPING UNSUITABLE MATERIAL FROM PAD SITE. THEN PLACE & COMPACT BACKFILL MATERIAL AT GEOTECHNICAL ENGINEER'S AND ARCHITECT'S RECOMMENDATIONS. ALL BACKFILL MATERIAL MUST BE ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.
5. ALL FILL UNDER PAVEMENT SHALL BE COMPACTED TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR BALANCING THE SITE EARTHWORK ON SITE. THE CONTRACTOR IS RESPONSIBLE FOR BURY/BORROW PITS AS NEEDED TO BALANCE THE SITE. GEOTECH AND ENGINEER MUST APPROVE AREAS PRIOR TO BURY/BORROW OPERATIONS. AS-BUILT OF BURY/BORROW PIT WILL BE REQUIRED AT COMPLETION OF CONTRACTOR WORK AND MUST BE SUBMITTED TO THE CONSTRUCTION MANAGER.
7. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES REQUIRED BY BUTLER COUNTY AND THE OHIO EPA.
8. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. IF NO SPECIFICATIONS ARE SUPPLIED, USE ODOT ITEM 659.
9. CONTRACTOR TO LAYOUT BUILDING BASED ON ARCHITECTURAL/FOUNDATION PLANS. SITE PLAN IS FOR CONCEPTUAL PURPOSES ONLY.

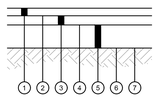
UTILITY NOTES

1. ALL DRAIN TILE AND STORM SEWERS DAMAGED, DISTURBED OR REMOVED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH THE SAME QUALITY PIPE OR BETTER, MAINTAINING THE SAME GRADIENT AS EXISTING. THE DRAIN TILE AND/OR STORM SEWER SHALL BE CONNECTED TO THE CURB SUBDRAIN, STORM SEWER SYSTEM OR OUTLETTED INTO THE ROADWAY DITCH AS APPLICABLE. REPLACED DRAIN TILE/STORM SEWER SHALL BE LAID ON COMPACTED BEDDING EQUAL IN DENSITY TO SURROUNDING STRATUM. REPLACEMENT SHALL BE DOWN AT THE TIME OF THE BACKFILL OPERATION. COST OF THIS WORK TO BE INCLUDED IN THE PRICE BID FOR THE PROJECT.
2. ALL EXISTING UTILITIES KNOWN TO EXIST HAVE BEEN SHOWN ON THESE PLANS IN THEIR APPROXIMATE LOCATION. PRIOR TO THE BEGINNING CONSTRUCTION OR EARTH MOVING OPERATIONS, THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF THE UTILITIES SHOWN. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE PROTECTION AND/OR RELOCATION OF ANY UTILITIES THAT MAY EXIST AND ARE NOT SHOWN.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE RELOCATION AND/OR PROTECTION OF ANY UTILITIES AS REQUIRED BY THE PLAN WITH THE OWNER OF THE AFFECTED UTILITY.
4. UTILITY POLES WITHIN INFLUENCE OF THE UTILITY OPERATIONS SHALL BE REINFORCED BY THE UTILITY COMPANY PRIOR TO THESE CONSTRUCTION ACTIVITIES. NOTIFICATION OF THE UTILITY COMPANY PRIOR TO CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. COMPACTED FILLS ARE TO BE MADE TO A MINIMUM OF THREE FEET ABOVE THE CROWN OF ANY PROPOSED SEWER PRIOR TO CUTTING OF TRENCHES FOR PLACEMENT OF SAID SEWERS. ALL FILLS SHALL BE CONTROLLED, COMPACTED, AND INSPECTED BY AN APPROVED TESTING LABORATORY OR AN INSPECTOR FROM THE APPROPRIATE GOVERNMENTAL AGENCY.
6. CONTRACTOR TO REPLACE ANY PAVEMENT OR UTILITIES DAMAGED WHICH ARE NOT SPECIFIED TO BE REMOVED ON THESE PLANS.
7. ALL CATCH BASINS PLACED WITHIN THE PAVEMENT SHALL HAVE HEAVY DUTY FRAMES AND GRATES AND CONFORM TO ADA REQUIREMENTS.
8. ADJUST ALL EXISTING CASTINGS AND CLEANOUTS WITHIN PROJECT AREA TO GRADE AS REQUIRED.
9. ALL CATCH BASINS WITH DEPTH GREATER THAN 4.5' SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF ODOT ITEM 611.
10. ALL STORM AND SANITARY SEWER MANHOLES WITH A DEPTH GREATER THAN 4' SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF ODOT ITEM 611.
11. DISTANCES SHOWN FOR BOTH SANITARY AND STORM SEWER PIPES ARE MEASURED FROM CENTER OF STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR ACTUAL FIELD CUT LENGTH. COORDINATES FOR STORM AND SANITARY STRUCTURES ARE SHOWN TO THE CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
12. IMMEDIATELY AFTER PLACEMENT OF ANY CONDUITS, THE CONTRACTOR SHALL CONSTRUCT THE END TREATMENTS REQUIRED BY THE PLANS AT BOTH THE OUTLET AND INLET ENDS. THIS SHALL INCLUDE HEADWALLS, CONCRETE, RIP RAP, ROCK CHANNEL PROTECTION, SODDING, POURING BOTTOMS, MUDDING LIFT HOLES, ETC.
13. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER. EROSION CONTROL MEASURES MUST PROVIDE PROTECTION UNTIL COMPLETION OF THE PROJECT AND VEGETATIVE STABILIZATION.
14. THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, DOWNSPOUTS, PIPING AND CONNECTIONS ETC. AS REQUIRED TO CONVEY THE ROOF AND PAVED SURFACE DRAINAGE TO THE DETENTION BASIN.
15. ROOF DRAINS, FOUNDATION DRAINS AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
16. SITE CONTRACTOR SHALL PICK UP ALL UTILITIES, WITH THE EXCEPTION OF DOWNSPOUTS, 5' OUTSIDE BUILDING WALL. COORDINATE WITH CONSTRUCTION MANAGER.
17. ALL PROPOSED STORM SEWERS AND SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
18. ALL STORM STRUCTURES ARE ODOT TYPES UNLESS OTHERWISE INDICATED.
19. STORM SEWER PIPE LABELED "STM" SHALL BE ONE OF THE FOLLOWING: PVC SDR-35, PVC PROFILE PIPE PER ODOT ITEM 707.42, HIGH DENSITY POLYETHYLENE PER ODOT ITEM 707.33, ALUMINIZED CORRUGATED METAL, ODOT ITEM 707.01, 707.02, OR REINFORCED CONCRETE PIPE, ODOT ITEM 706.02 CLASS IV. STORM SEWER PIPE LABELED "RCP" SHALL BE REINFORCED CONCRETE PIPE, ODOT ITEM 706.02 CLASS IV. ALL STORM IS TO BE INSTALLED PER ODOT ITEM 611. ALL STORM PIPE USED MUST HAVE A MANUFACTURER SPECIFIED FRICTION FACTOR OF 0.013 (N=0.013) OR LESS.
20. ALL CATCH BASINS IN THE PAVEMENT ARE TO HAVE 4, 4" PERFORATED UNDERDRAINS EXTENDING 10 LF FROM THE CATCH BASIN IN THE UPHILL DIRECTION AND CAPPED. ALL CATCH BASINS IN THE CURB ARE TO HAVE 2, 4" PERFORATED UNDERDRAINS EXTENDING 10 LF FROM THE CATCH BASIN IN THE UPHILL DIRECTION AND CAPPED.
21. FOR EXACT LOCATION OF DOWN SPOUTS & ROOF DRAINS, COORDINATE WITH CONSTRUCTION MANAGER. ALL ROOF DRAINS ARE TO BE 8" UNLESS OTHERWISE NOTED.
22. ALL YARD DRAINS SHALL BE ONE OF THE FOLLOWING: NYLOPLAST-ADS DRAIN BASIN, NDS DURACAST FABRICATED PVC CATCH BASIN, AGRI-DRAIN CATCH BASIN, OR APPROVED EQUAL.
23. ALL EXISTING INVERTS ALONG THE PROPOSED TOP OF CASTING ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OF THE SEWER.
24. ANY FIELD TILE CUT IN EXCAVATION WHICH DRAINS IN AN OFFSITE AREA MUST BE TIED INTO THE STORM DRAINAGE SYSTEM.
25. THE FLOW IN ALL SEWERS, DRAINS, FIELD TILES AND WATERCOURSES ENCOUNTERED SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND WHENEVER SUCH WATERCOURSES AND DRAINS ARE DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK, THEY SHALL BE RESTORED BY THE CONTRACTOR AT HIS OWN EXPENSE TO A CONDITION SATISFACTORY TO THE ENGINEER.
26. SANITARY SEWER SHALL BE SDR-35 OR APPROVED EQUAL AND CONFORM TO THE STANDARDS AND SPECIFICATIONS OF BUTLER COUNTY. PIPE MUST MEET MINIMUM SLOPE REQUIREMENTS OF BUTLER COUNTY AND OHIO EPA. SANITARY SEWER SHALL BE INSTALLED AT A MINIMUM DEPTH OF FOUR FEET (4') UNLESS OTHERWISE NOTED. A MINIMUM OF 18" CLEARANCE SHALL BE MAINTAINED AT ALL WATERLINE CROSSINGS. SANITARY SERVICE JOINTS SHALL CONFORM TO ASTM D-3212.
27. SANITARY SEWER IS TO BE BEDDED WITH CLEAN GRANULAR MATERIAL-AGGREGATES NOT TO BE LARGER THAN 3/4" AND NOT SMALLER THAN NO. 8 SIEVE, FREE OF SILT AND FINES, AASHTO M43 SIZE #67, 7 OR 8. BEDDING TO BE MINIMUM OF 6" BELOW & 12" ABOVE THE PIPE.
28. ALL WATERLINE CROSSINGS SHALL MAINTAIN A VERTICAL SEPARATION OF 18" MINIMUM. SANITARY SEWER SHALL BE LOCATED A MINIMUM OF 18" BELOW WATERLINE AT ALL CROSSINGS. WATERLINE SHALL BE LOCATED A MINIMUM OF 10' HORIZONTALLY FROM ANY SANITARY SEWER. ALL MEASUREMENTS SHALL BE TAKEN FROM OUTSIDE OF SEWER PIPE TO THE OUTSIDE OF WATERLINE PIPE. ONE FULL LENGTH OF WATERLINE PIPE SHALL BE LOCATED AT ALL CROSSINGS TO ENABLE BOTH JOINTS TO BE LOCATED AS FAR FROM SEWER AS POSSIBLE. ALL WATER SHALL HAVE A MINIMUM OF 4' OF COVER.
29. WATERLINE SHALL BE DUCTILE IRON PIPE CLASS 52, MINIMUM 250 PSI. (ADD SPECIAL NOTE FOR WATERLINE 2 INCHES AND UNDER TO BE "K" COPPER OR POLYTUBING, MAKE SURE SPEC FOLLOWS)



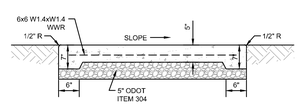
1. 1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
2. ODOT ITEM 407 TACK COAT, APPLY IF TIME BETWEEN ASPHALT LIFTS EXCEEDS 30 DAYS
3. 2 1/2" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
4. ODOT ITEM 408 PRIME COAT, APPLIED AT 0.10 GAL/SY
5. 6" ODOT ITEM 304 AGGREGATE BASE
6. SUBGRADE COMPACTION, REFERENCE ODOT ITEM 204, EARTHWORK SPECIFICATION 312000 AND SOILS REPORT

STANDARD DUTY ASPHALT PAVEMENT DETAIL
1 / C100 — N.T.S.



1. 1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
2. ODOT ITEM 407 TACK COAT, APPLY IF TIME BETWEEN ASPHALT LIFTS EXCEEDS 30 DAYS
3. 4" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
4. ODOT ITEM 408 PRIME COAT, APPLIED AT 0.10 GAL/SY
5. 8" ODOT ITEM 304 AGGREGATE BASE
6. WOVEN GEOTEXTILE FABRIC, ODOT ITEM 712.09 TYPE D
7. SUBGRADE COMPACTION, REFERENCE ODOT ITEM 204, EARTHWORK SPECIFICATION 312000 AND SOILS REPORT

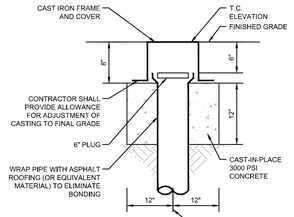
HEAVY DUTY ASPHALT PAVEMENT DETAIL
2 / C100 — N.T.S.



NOTES:

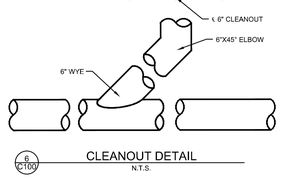
1. INSTALL EXPANSION JOINTS AT 30' OC MAXIMUM AND WHERE SLAB ABUTS STRUCTURES, WHERE NEW WALK ABUTS ADJOINING WALK, SAWCUT EXISTING WALK TO NEAREST JOINT AND INSTALL EXPANSION JOINT. EXPANSION JOINTS SHALL BE 1/2" WIDE BY DEPTH OF SLAB, SEAL ALL EXPANSION JOINTS.
2. INSTALL CONTROL JOINTS AT 6' OC MAXIMUM. CONTROL JOINTS SHALL BE 3/8" WIDE BY 1 1/2" DEEP AND TOOLED, SAWED JOINTS ARE NOT PERMITTED.
3. WALK SHALL HAVE A MINIMUM CROSS SLOPE OF 1.00%, MAXIMUM CROSS SLOPE OF 2.00%.
4. WATER AND UTILITY BOXES IN THE WALK AREA SHALL BE ADJUSTED FLUSH WITH THE FINAL SURFACE.
5. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DETAIL AT ALL BUILDING DOORS.

EXTERIOR CONCRETE SLAB WALK DETAIL
6 / C100 — N.T.S.



1. 1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
2. ODOT ITEM 407 TACK COAT, APPLY IF TIME BETWEEN ASPHALT LIFTS EXCEEDS 30 DAYS
3. 4" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
4. ODOT ITEM 408 PRIME COAT, APPLIED AT 0.10 GAL/SY
5. 8" ODOT ITEM 304 AGGREGATE BASE
6. WOVEN GEOTEXTILE FABRIC, ODOT ITEM 712.09 TYPE D
7. SUBGRADE COMPACTION, REFERENCE ODOT ITEM 204, EARTHWORK SPECIFICATION 312000 AND SOILS REPORT

HEAVY DUTY ASPHALT PAVEMENT DETAIL
2 / C100 — N.T.S.



NOTES:

GENERAL

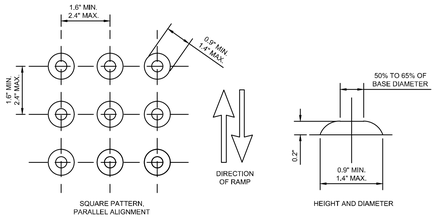
1. DETECTABLE WARNINGS ARE A DISTINCTIVE SURFACE PATTERN OF TRUNCATED DOMES WHICH ARE DETECTABLE BY CANE OR UNDERFOOT TO ALERT PEOPLE WITH VISION IMPAIRMENTS OF THEIR APPROACH TO STREETS AND HAZARDOUS DROP-OFFS.

PLACEMENT

2. DETECTABLE WARNINGS ARE TO BE INSTALLED AT ANY LOCATION WHERE PEDESTRIANS MIGHT CROSS PATHS WITH VEHICULAR TRAFFIC LANES, SUCH AS THE BASE OF CURB RAMPS OR AT BLENDED CURBS. A 24" STRIP OF DOMES IS TO BE INSTALLED FOR THE FULL WIDTH OF THE RAMP OR WALK.
3. THE DEPTH OF CONCRETE UNDERNEATH DETECTABLE WARNING PRODUCTS SHALL BE A MINIMUM OF 4".

PRODUCTS & COLORS

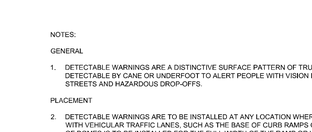
4. COLOR OF THE DETECTABLE WARNINGS SHOULD CONTRAST WITH SURROUNDING CONCRETE WALK AND RAMP. BLACK IS NOT AN ACCEPTABLE COLOR. APPROVED PRODUCTS AND GUIDANCE ON COLOR MAY BE FOUND ON THE ODOT OFFICE OF ROADWAY ENGINEERING SERVICE'S DETECTABLE WARNINGS APPROVED LIST. INSTALL PRODUCTS AS PER MANUFACTURER'S PRINTED INSTRUCTIONS.



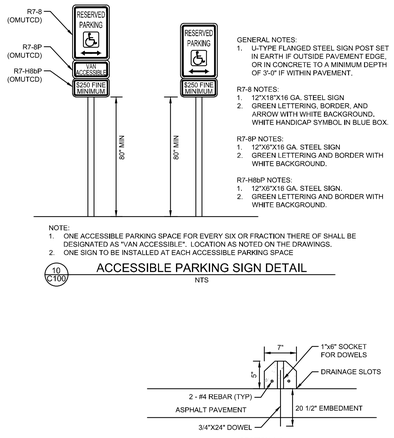
DETECTABLE WARNINGS DETAIL
7 / C100 — N.T.S.



CATCH BASIN GRATE DETAIL
4 / C100 — N.T.S.



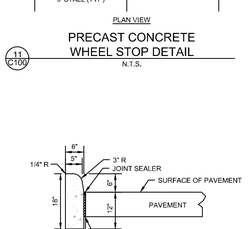
FLEXSTORM INLET FILTER DETAIL
3 / C100 — N.T.S.



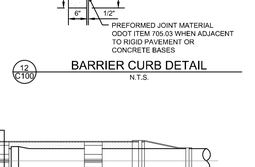
NOTE:
1. ONE ACCESSIBLE PARKING SPACE FOR EVERY SIX OR FRACTION THERE OF SHALL BE DESIGNATED AS "VAN ACCESSIBLE". LOCATION AS NOTED ON THE DRAWINGS.
2. ONE SIGN TO BE INSTALLED AT EACH ACCESSIBLE PARKING SPACE

ACCESSIBLE PARKING SIGN DETAIL
10 / C100 — NTS

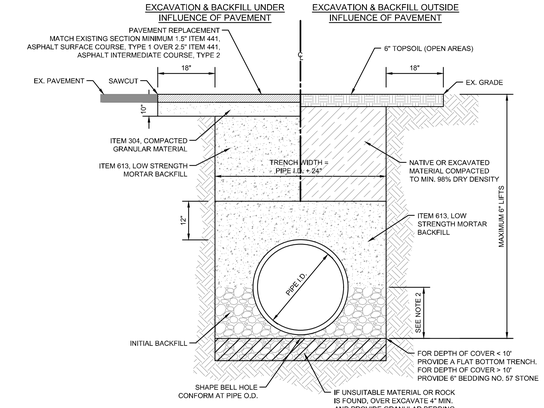
JACK & BORE DETAIL
8 / C100 — N.T.S.



PRECAST CONCRETE WHEEL STOP DETAIL
11 / C100 — N.T.S.



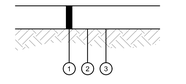
BARRIER CURB DETAIL
12 / C100 — N.T.S.



NOTES:

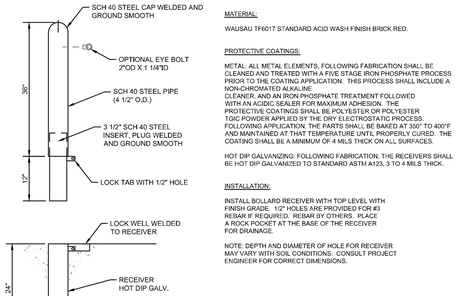
1. REFER TO OSHA REQUIREMENTS FOR MAXIMUM ALLOWABLE TRENCH SLOPES.
2. THIS PORTION OF THE PIPE EMBEDMENT ZONE MUST BE RECOMPACTED TO PROPER DENSITIES AFTER MOVING SUPPORT SYSTEM FORWARD.
3. PROVIDE FILTER FABRIC WHEN VERY FINE OR UNSTABLE MATERIAL IS ENCOUNTERED.
4. APPLY ITEM 407 TACK COAT TO VERTICAL FACE OF SAWCUT PAVEMENT.

UTILITY CONDUIT OPEN CUT DETAIL
13 / C100 — N.T.S.



1. 6" ODOT ITEM 304 AGGREGATE BASE
2. WOVEN GEOTEXTILE FABRIC, ODOT ITEM 712.09 TYPE D
3. SUBGRADE COMPACTION, REFERENCE ODOT ITEM 204, EARTHWORK SPECIFICATION 312000 AND SOILS REPORT

GRAVEL PAVEMENT DETAIL
14 / C100 — N.T.S.



NOTES:

MATERIAL:

WAUSAU TF6017 STANDARD ACID WASH FINISH BRICK RED.

PROTECTIVE COATINGS:

METAL: ALL METAL ELEMENTS, FOLLOWING FABRICATION SHALL BE CLEANED AND TREATED WITH A FIVE STAGE IRON PHOSPHATE PROCESS PRIOR TO THE COATING APPLICATION. THIS PROCESS SHALL INCLUDE A NON-CHROMATED ALKALINE CLEANER, AND AN IRON PHOSPHATE TREATMENT FOLLOWED WITH AN ACIDIC SEALER FOR MAXIMUM ADHESION. THE PROTECTIVE COATINGS SHALL BE: POLYESTER OR POLYESTER TGIC POWDER APPLIED BY THE DRY ELECTROSTATIC PROCESS. FOLLOWING APPLICATION, THE PARTS SHALL BE BAKED AT 350° TO 400°F AND MAINTAINED AT THAT TEMPERATURE UNTIL PROPERLY CURED. THE COATING SHALL BE A MINIMUM OF 4 MILS THICK ON ALL SURFACES.

HOT DIP GALVANIZING: FOLLOWING FABRICATION, THE RECEIVERS SHALL BE HOT DIP GALVANIZED TO STANDARD ASTM A123, 3 TO 4 MILS THICK.

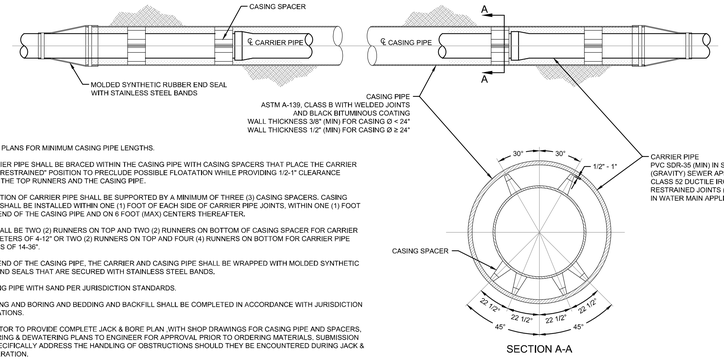
INSTALLATION:

INSTALL BOLLARD RECEIVER WITH TOP LEVEL WITH FINISH GRADE. 1/2" HOLES ARE PROVIDED FOR #3 REBAR IF REQUIRED. REBAR BY OTHERS. PLACE A ROCK POCKET AT THE BASE OF THE RECEIVER FOR DRAINAGE.

NOTE: DEPTH AND DIAMETER OF HOLE FOR RECEIVER MAY VARY WITH SOIL CONDITIONS. CONSULT PROJECT ENGINEER FOR CORRECT DIMENSIONS.

REMOVABLE BOLLARD DETAIL
15 / C100 — N.T.S.

BARRIER CURB DETAIL
12 / C100 — N.T.S.



NOTES:

1. REFER TO PLANS FOR MINIMUM CASING PIPE LENGTHS.
2. THE CARRIER PIPE SHALL BE BRACED WITHIN THE CASING PIPE WITH CASING SPACERS THAT PLACE THE CARRIER PIPE IN A "RESTRAINED" POSITION TO PRECLUDE POSSIBLE FLOATATION WHILE PROVIDING 1/2-1" CLEARANCE BETWEEN THE TOP RUNNERS AND THE CASING PIPE.
3. EACH SECTION OF CARRIER PIPE SHALL BE SUPPORTED BY A MINIMUM OF THREE (3) CASING SPACERS. CASING SPACERS SHALL BE INSTALLED WITHIN ONE (1) FOOT OF EACH SIDE OF CARRIER PIPE JOINTS, WITHIN ONE (1) FOOT OF EACH END OF THE CASING PIPE AND ON 6 FOOT (MAX) CENTERS THEREAFTER.
4. THERE SHALL BE TWO (2) RUNNERS ON TOP AND TWO (2) RUNNERS ON BOTTOM OF CASING SPACER FOR CARRIER PIPE DIAMETERS OF 4-12" OR TWO (2) RUNNERS ON TOP AND FOUR (4) RUNNERS ON BOTTOM FOR CARRIER PIPE DIAMETERS OF 14-36".
5. AT EACH END OF THE CASING PIPE, THE CARRIER AND CASING PIPE SHALL BE WRAPPED WITH MOLDED SYNTHETIC RUBBER END SEALS THAT ARE SECURED WITH STAINLESS STEEL BANDS.
6. FILL CASING PIPE WITH SAND PER JURISDICTION STANDARDS.
7. ALL JACKING AND BORING AND BEDDING AND BACKFILL SHALL BE COMPLETED IN ACCORDANCE WITH JURISDICTION SPECIFICATIONS.
8. CONTRACTOR TO PROVIDE COMPLETE JACK & BORE PLAN ,WITH SHOP DRAWINGS FOR CASING PIPE AND SPACERS, AND SHORING & DEWATERING PLANS TO ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS, SUBMISSION SHALL SPECIFICALLY ADDRESS THE HANDLING OF OBSTRUCTIONS SHOULD THEY BE ENCOUNTERED DURING JACK & BORE OPERATION.

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METROPARKS OF BUTLER COUNTY
2051 TIMBERMAN RD, HAMILTON, OH 45013

ISSUANCES

NO.	DESCRIPTION	DATE
1	BID AND PERMIT SET	06/02/17
2	BID AND PERMIT SET REV.	06/14/17

GENERAL NOTES & DETAILS

DATE 06/02/17

COMM NO. 2014000.00

C100

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2"=1" REFERENCE LINE

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Ex. Gravel Drive

Ex. Gravel Drive

Ex. Fence Line

Ex. Swale

Ex. Gravel Parking Lot Entrance (To Be Removed)

Ex. CB#3 Grate=889.72 Inv=885.57 (To Remain)

Ex. 30" Storm To Pond #3 Near Butler-Warren Road

Ex. Soccer Fields Not To Be Disturbed Locate With MetroParks Prior To Earthwork Activities

Ex. Asphalt Walk (To Be Removed)

Ex. CB#2 Grate=890.01 Ex. 30"Inv=885.86 (To Remain)

Ex. 30" Storm 61.05' @ 0.48%

Ex. 30" Storm 117.57' @ 2.09%

Ex. Gravel Parking Lot (To Be Removed)

Ex. CB#1 Grate=890.42 Inv=888.32

Ex. Gravel Drive

Ex. Swale

(Not To Be Disturbed)

Ex. Field

Ex. Conc. (Elec. Transformer)

Ex. Field

Ex. Field

MATCH LINE SEE SHEET C111

MATCH LINE SEE SHEET C111

LEGEND

	Ex. Light Pole
	Ex. Utility Pole
	Ex. Sign
	Ex. Mailbox
	Ex. Water Valve
	Ex. Water Meter
	Ex. Gas Meter
Ex. San. MH	Ex. Sanitary Sewer Manhole
Ex. C.B.	Ex. Catch Basin
OU	Ex. Overhead Utility Lines
UU	Ex. Underground Utility Lines

EXISTING UNDERGROUND UTILITIES REPRESENTED ON THIS DRAWING ARE APPROXIMATE LOCATION ONLY BASED ON FIELD OBSERVATIONS AND AVAILABLE RECORDS. CONTACT THE LOCAL UTILITY PROTECTION SERVICES AND AGENCIES PRIOR TO ANY EXCAVATION, CONSTRUCTION OR DESIGN.

ELEVATION DATUM SHOWN IS RELATIVE TO NAVD 88 BASED ON GPS OBSERVATIONS AND AN OPUS SOLUTION.

NOTE: ORIGINAL SURVEY DONE BY ABERCROMBIE & ASSOCIATES. ADDITIONAL SURVEY DONE BY THE KLEINGERS GROUP.

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0 15 30 60

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ISSUANCES

1	05.02.17	BID AND PERMIT SET
	06.16.17	BID AND PERMIT SET #2

SURVEY BASEMAP

DATE 06/02/17

COMM NO. 2014000.00

C110

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MATCH LINE - SEE SHEET C110

MATCH LINE - SEE SHEET C110

MATCH LINE - SEE THIS SHEET

Ex. Lake
Normal Pool=888.65

Ex. Gravel Drive

Ex. Gravel Road

Ex. 18" Stm.
39.69' @ 0.68%

Ex. 24" Stm.
76.69' @ 0.49%

Ex. 24" Stm.
36.72' @ 1.17%

Inv=
889.47

Inv=
890.30

Inv=
889.80

Inv=
890.73

Inv=
890.99

TYLERSVILLE ROAD

PEPPER PIKE

INLET
TOP = 895.00
INV = 892.6

INLET
TOP = 894.37
INV = 892.04

INLET
TOP = 894.34
INV(NE) = 891.94
INV(SE,W) = 891.89

INV = 891.40

INV = 890.71

INV = 890.13

INV = 890.63

INV = 890.21

INV = 887.83

INV = 888.12

INV = 888.96

EX SAN MH
TOP=899.98
INV(N)=879.90
INV(S)=879.81
INV(W)=879.84

EX SAN

LEGEND

- SANITARY MANHOLE
- CATCH BASIN
- INLET
- PULL BOX
- UTILITY POLE
- GUY WIRE
- SINGLE POST SIGN
- WATER VALVE
- FIRE HYDRANT
- WATER LINE
- TREE LINE
- OVERHEAD ELECTRIC
- SANITARY SEWER
- STORM SEWER
- HARDWOOD TREE
- CONCRETE
- ASPHALT
- PAVERS

LEGEND

	Ex. Light Pole
	Ex. Utility Pole
	Ex. Sign
	Ex. Mailbox
	Ex. Water Valve
	Ex. Water Meter
	Ex. Gas Meter
Ex. San. MH	Ex. Sanitary Sewer Manhole
Ex. C.B.	Ex. Catch Basin
—OU—	Ex. Overhead Utility Lines
—UU—	Ex. Underground Utility Lines

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1	05.02.17	BID AND PERMIT SET
2	06.14.17	BID AND PERMIT SET REV.

SURVEY BASEMAP

DATE 06/02/17

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DEMOLITION NOTE

1. ALL BOLD ITEMS ARE TO BE REMOVED.

DEMOLITION PLAN LEGEND

- SAWCUT LINE
- REMOVE ASPHALT WALK
- REMOVE GRAVEL

DEMOLITION KEY NOTE

1. REMOVE EXISTING GRAVEL PARKING LOT AND GRAVEL DRIVE TO EXTENTS INDICATED.
2. REMOVE EXISTING ASPHALT WALK TO EXTENTS INDICATED.
3. REMOVE EXISTING SOCCER GOAL POSTS AND RETURN TO OWNER.
4. REMOVE EXISTING SIGN.
5. REMOVE OR RELOCATE EXISTING ELECTRIC.
6. OPEN CUT PAVEMENT. SEE DETAIL 13/C100.
7. PROTECT EXISTING STORM STRUCTURE AND PIPE.
8. EXISTING SOCCER FIELDS TO REMAIN. LOCATE WITH METROPARKS BEFORE EARTHWORK ACTIVITIES.
9. PROTECT EXISTING CONCRETE PAD AND ELECTRIC TRANSFORMER.

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DEMOLITION PLAN

DATE 06/02/17

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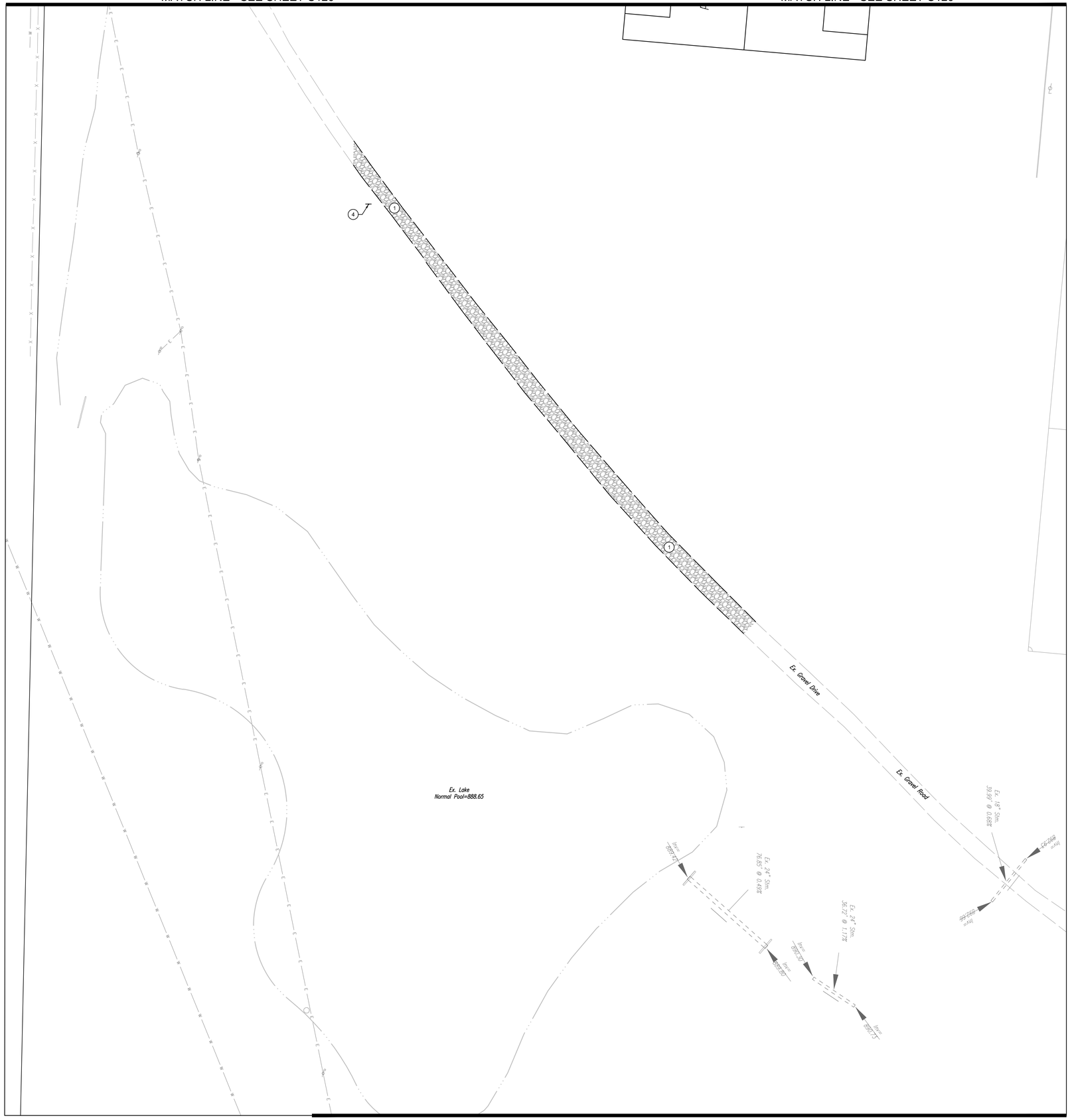
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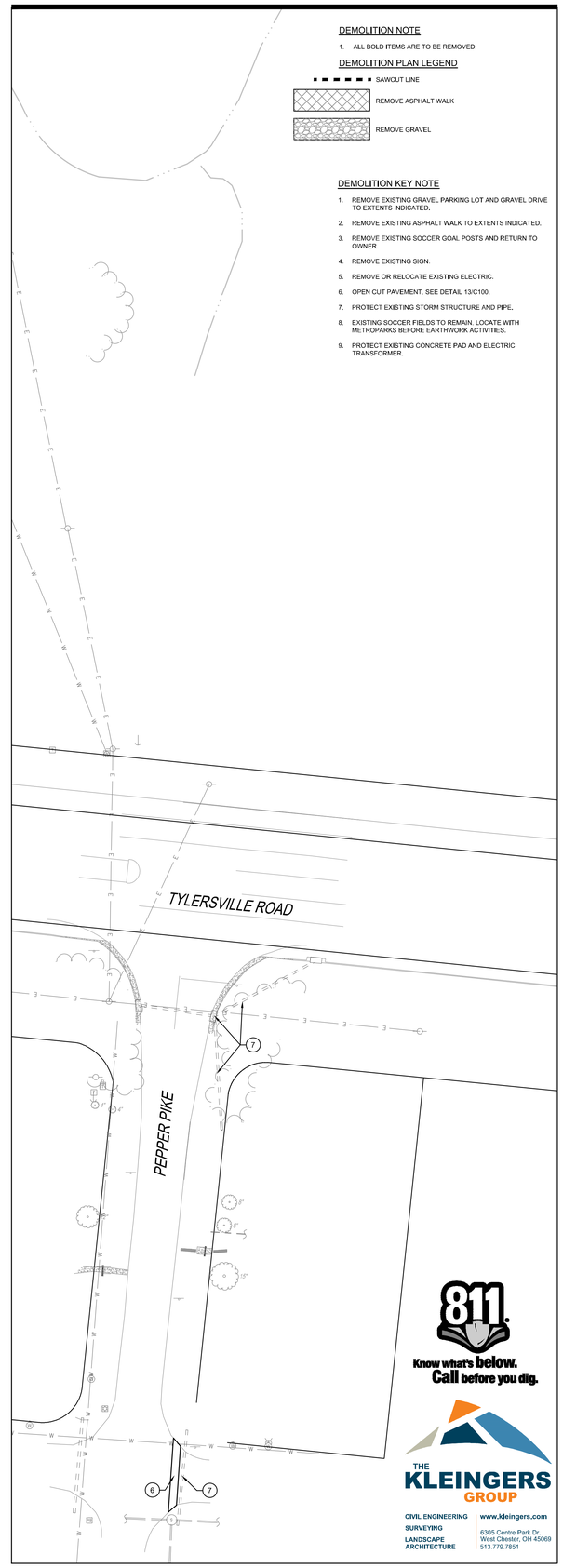
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MATCH LINE - SEE SHEET C120

MATCH LINE - SEE SHEET C120

MATCH LINE - SEE THIS SHEET





DEMOLITION NOTE

1. ALL BOLD ITEMS ARE TO BE REMOVED.

DEMOLITION PLAN LEGEND

- SAWCUT LINE
- REMOVE ASPHALT WALK
- REMOVE GRAVEL

DEMOLITION KEY NOTE

1. REMOVE EXISTING GRAVEL PARKING LOT AND GRAVEL DRIVE TO EXTENTS INDICATED.
2. REMOVE EXISTING ASPHALT WALK TO EXTENTS INDICATED.
3. REMOVE EXISTING SOCCER GOAL POSTS AND RETURN TO OWNER.
4. REMOVE EXISTING SIGN.
5. REMOVE OR RELOCATE EXISTING ELECTRIC.
6. OPEN CUT PAVEMENT. SEE DETAIL 13/C100.
7. PROTECT EXISTING STORM STRUCTURE AND PIPE.
8. EXISTING SOCCER FIELDS TO REMAIN. LOCATE WITH METROPARKS BEFORE EARTHWORK ACTIVITIES.
9. PROTECT EXISTING CONCRETE PAD AND ELECTRIC TRANSFORMER.

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DEMOLITION PLAN

DATE 06/02/17

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PROPOSED LEGEND

- STANDARD DUTY PAVEMENT
- HEAVY DUTY PAVEMENT
- CONCRETE WALK
- (X) # OF PARKING SPACES

TOTAL PARKING COUNT

LOT 1

STANDARD PARKING =	107 SPACES
HANDICAP PARKING =	5 SPACES
TOTAL PROVIDED =	112 SPACES

LOT 2

STANDARD PARKING =	268 SPACES
HANDICAP PARKING =	7 SPACES
TOTAL PROVIDED =	275 SPACES

TOTAL PARKING COUNT = 387 SPACES

Ex. Gravel Drive
Ex. Fence Line
Ex. Swale
Ex. Gravel Drive
Ex. Gravel Drive
Ex. Swale
Ex. Gravel Drive
Ex. Field
Ex. Field
Ex. CB#3 Grate=889.72 Inv=885.57
Ex. 30" Storm To Pond #3 Near Butler-Warren Road
Ex. CB#2 Grate=890.01 Ex. 30"Inv=885.86
Ex. 30" Storm 61.05' @ 0.48%
Ex. 30" Storm 177.57' @ 2.68%
Ex. CB#1 Grate=890.42 Inv=888.32
FUTURE MULTI-PURPOSE FIELD
FUTURE MULTI-PURPOSE FIELD
FUTURE MULTI-PURPOSE FIELD
BID ALTERNATE: POROUS CONCRETE PAVER GUTTER
PARKING LOT 1
PARKING LOT 2
FUTURE PLAYGROUND
PROPOSED FIELDHOUSE FF=900.50
WAUSAU TF6017 BOLLARD STANDARD ACID WASH FINISH BRICK RED. TYP
RETAINING WALL. SEE LANDSCAPE PLANS AND GRADING PLANS FOR DETAILS.
RETAINING WALL. SEE LANDSCAPE PLANS AND GRADING PLANS FOR DETAILS.
TRASH ENCLOSURE
CB-300
EX CB
CB-301
CB-302
CB-303
CB-304
CB-201
CB-105
SCO-17
SCO-16
HW-200
R15'
R25'
R33'
R50'
R90'
R220'
20'
24'
40'
18' (TYP.)
9' (TYP.)
11 C-100 (TYP.)
R3' (TYP.)
R20'
8'
6'
5'
9'
7'

MATCH LINE SEE SHEET C131

MATCH LINE SEE SHEET C131

0 15 30 60

(X-Y" REFERENCE UNIT)

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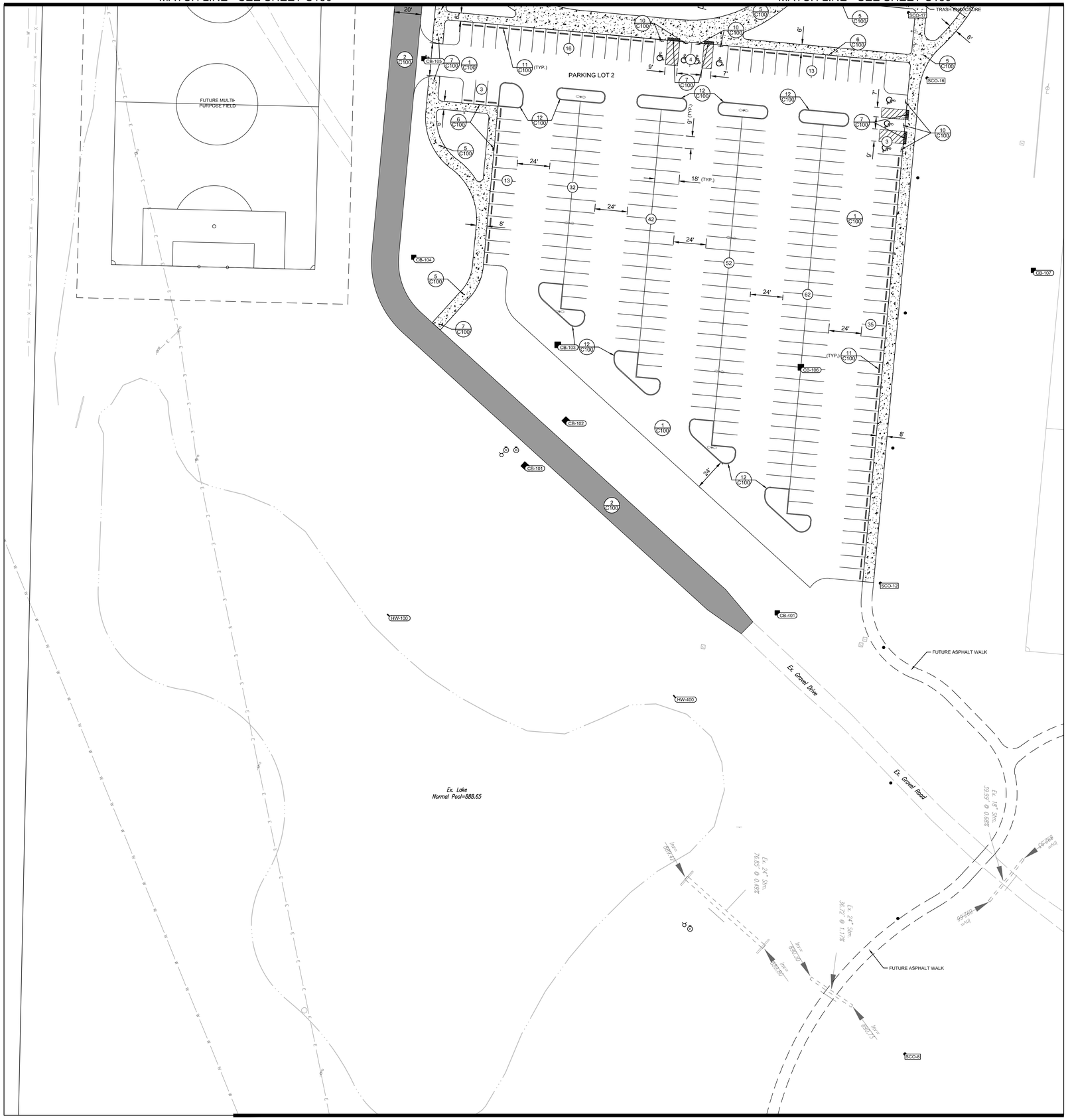
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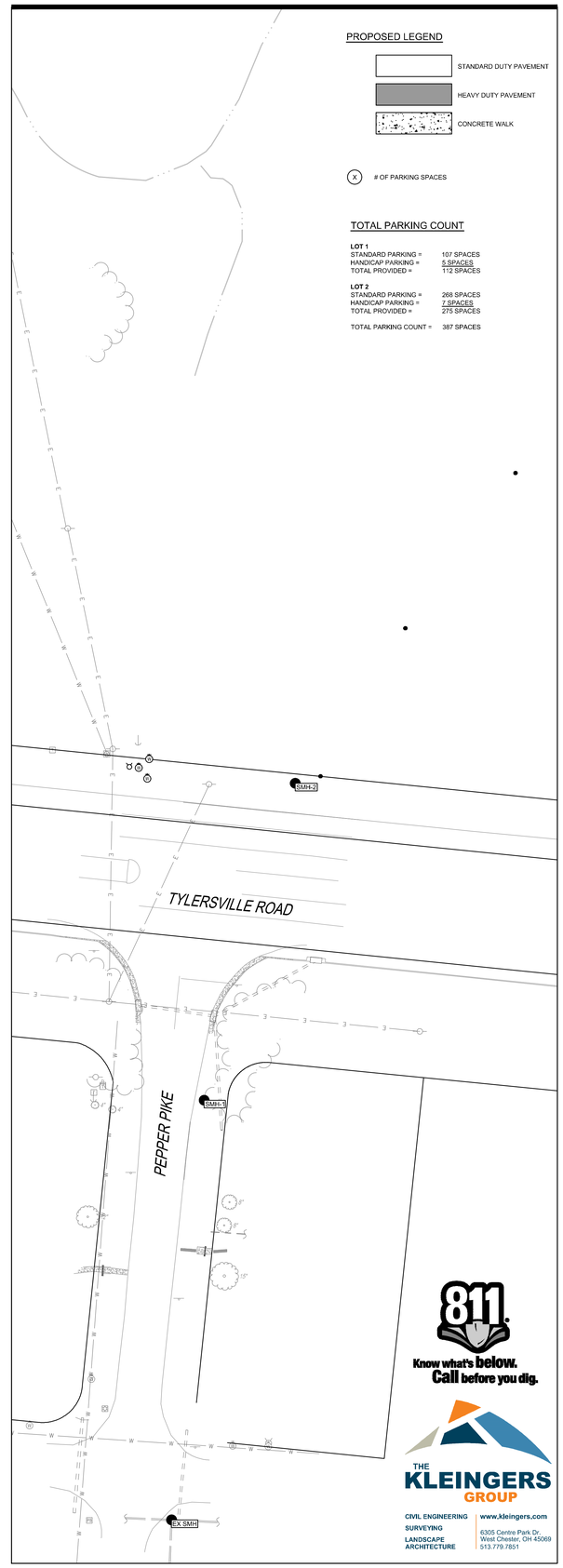
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MATCH LINE - SEE SHEET C130

MATCH LINE - SEE THIS SHEET





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5'-0" REFERENCE LINE

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NO.	DATE	DESCRIPTION
1	05.14.17	BID AND PERMIT SET

LOCATION PLAN

DATE 06/02/17

COMM NO. 2014000.00

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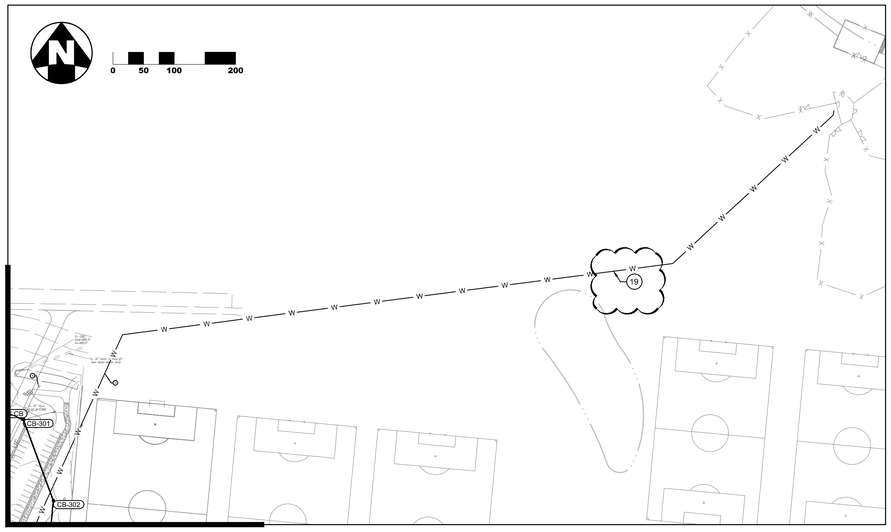
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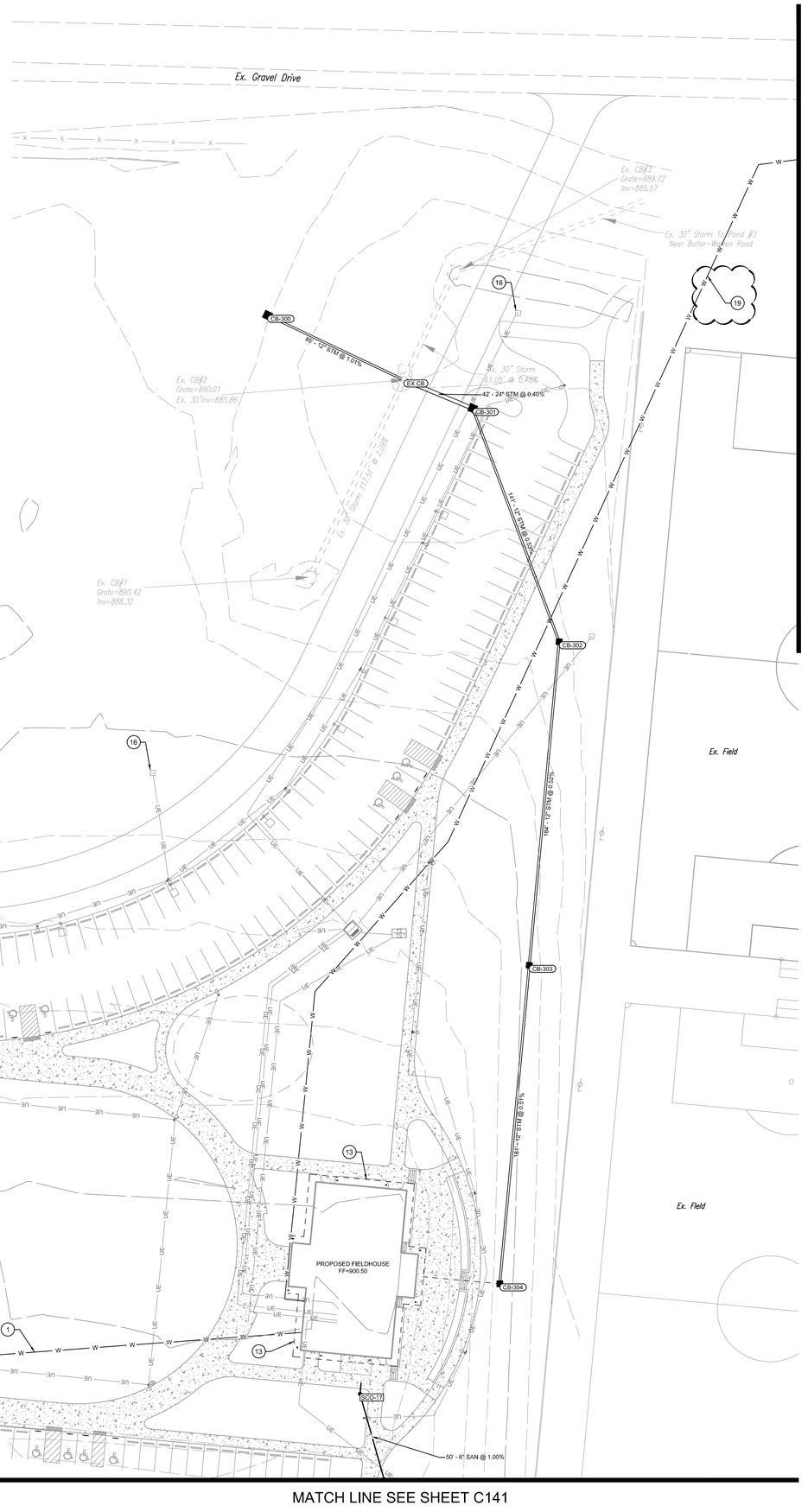
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UTILITY PLAN NOTES

1. 2" DOMESTIC WATER LINE
2. 6" FIRE LINE
3. 8" WATER LINE
4. 16" WATER LINE
5. 6" WATER VALVE
6. WATER METER
7. FIRE HYDRANT
8. 16" X 8" REDUCER
9. 16" X 6" REDUCER
10. CONNECT TO EXISTING WATER LINE
11. CONNECT TO EXISTING SANITARY MANHOLE. CONTRACTOR TO VERIFY INVERT AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
12. DIP WATER LINE UNDER PROPOSED UTILITY, KEEP A MINIMUM OF 18" SEPARATION.
13. 8" STORM UNDERDRAINS.
14. 8" WATER VALVE
15. 16" WATER VALVE
16. STUB ELECTRICAL CONDUIT FOR FUTURE USE. SEE ELECTRICAL PLANS FOR DETAILS.
17. 10' X 30' JACK AND BORE DRILLING AREA.
18. 10' X 10' JACK & BORE RECEIVING PIT
19. 3/4" WATER LINE
20. 16"x8" TEE
21. 16"x6" TEE
22. PER BUTLER COUNTY, 8" WATERLINE CAPPED AT THIS LOCATION. CONTRACTOR TO VERIFY IN FIELD AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
23. CONCRETE ENCASE STORM PIPE AT SANITARY CROSSING.



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UTILITY PLAN

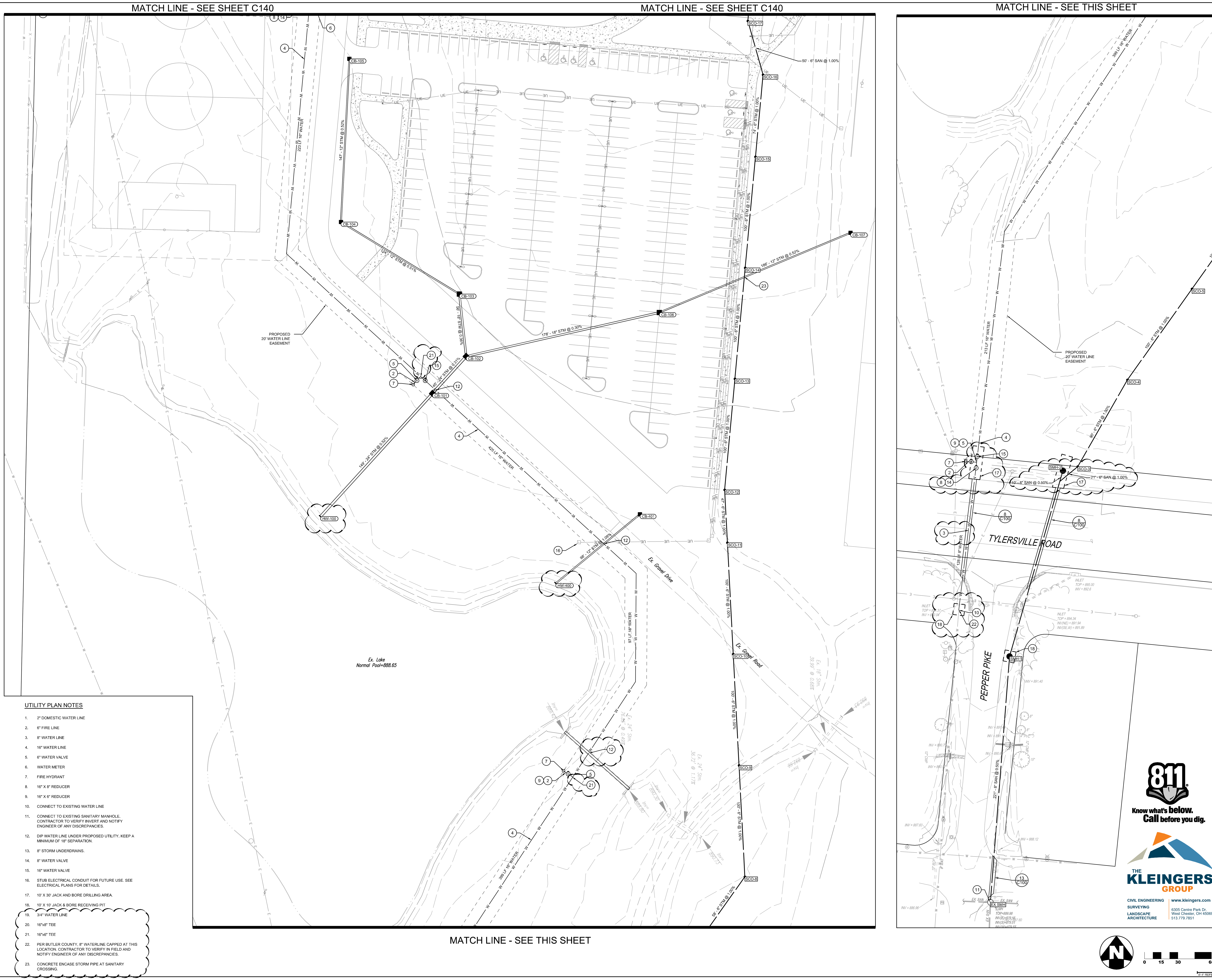
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UTILITY PLAN NOTES

1. 2" DOMESTIC WATER LINE
2. 6" FIRE LINE
3. 8" WATER LINE
4. 16" WATER LINE
5. 6" WATER VALVE
6. WATER METER
7. FIRE HYDRANT
8. 16" X 8" REDUCER
9. 16" X 6" REDUCER
10. CONNECT TO EXISTING WATER LINE
11. CONNECT TO EXISTING SANITARY MANHOLE. CONTRACTOR TO VERIFY INVERT AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
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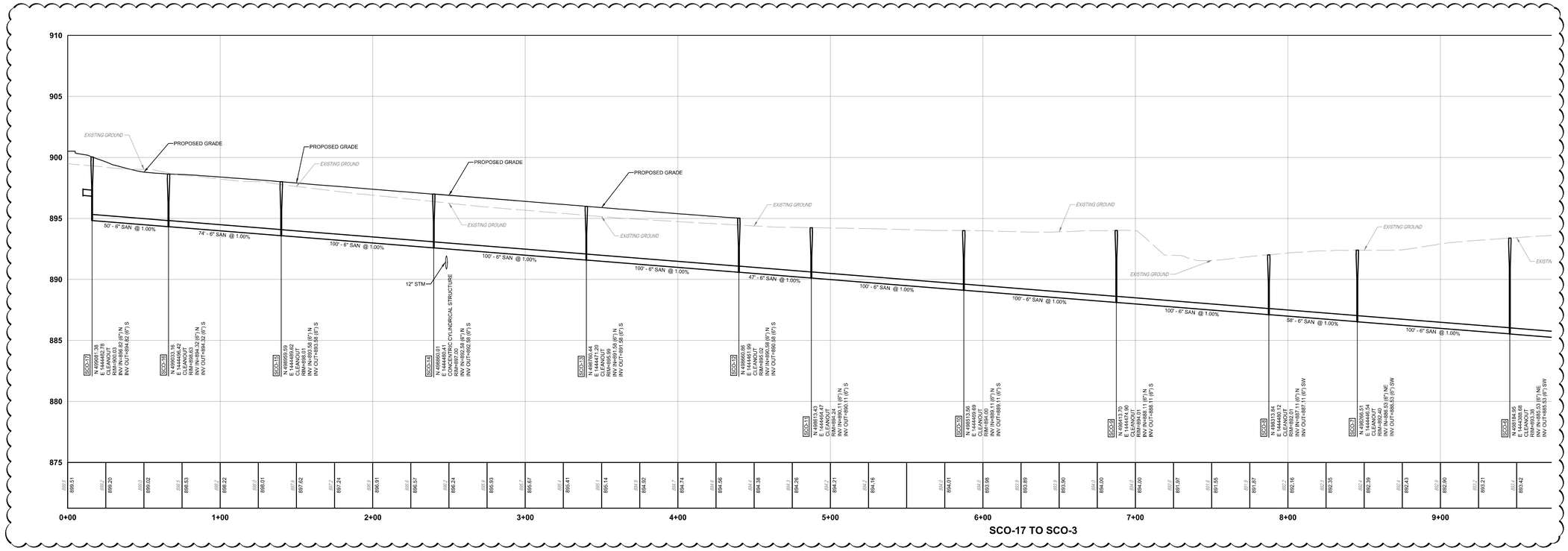
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UTILITY PLAN

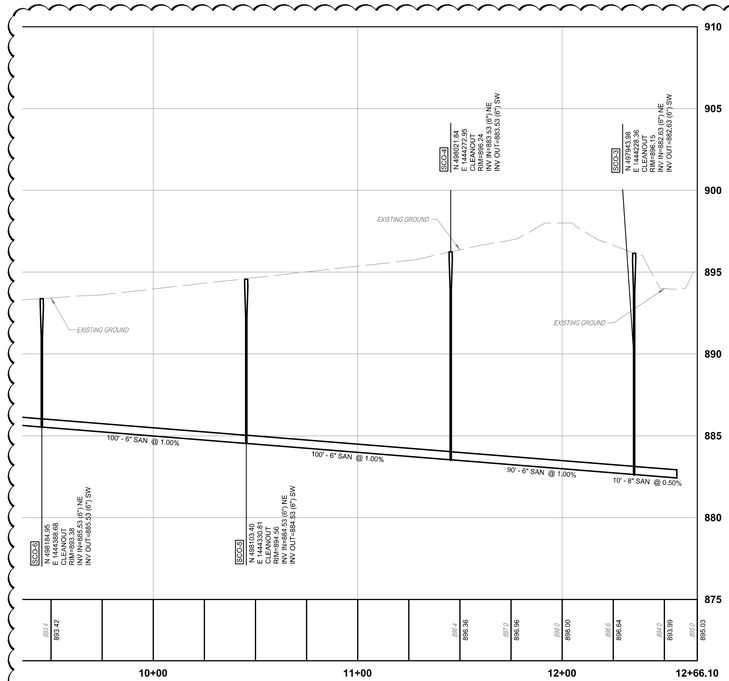
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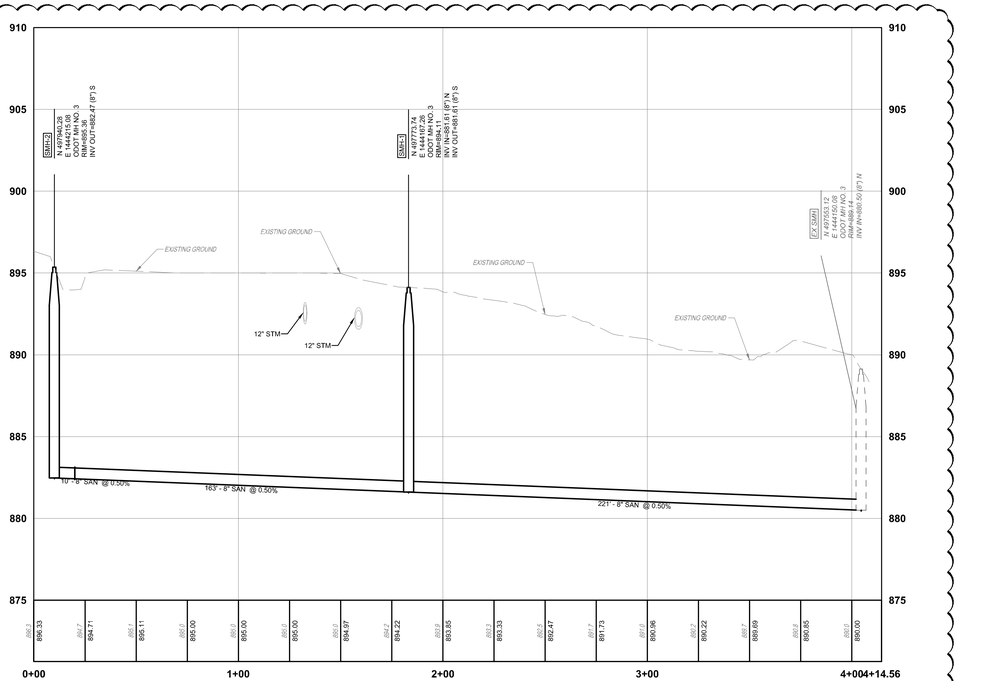
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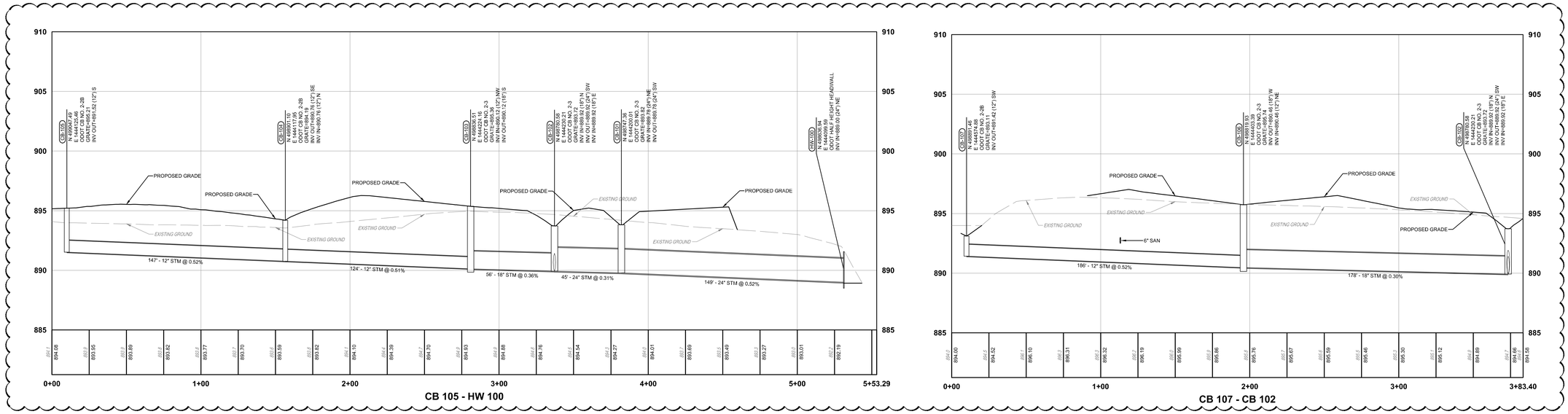
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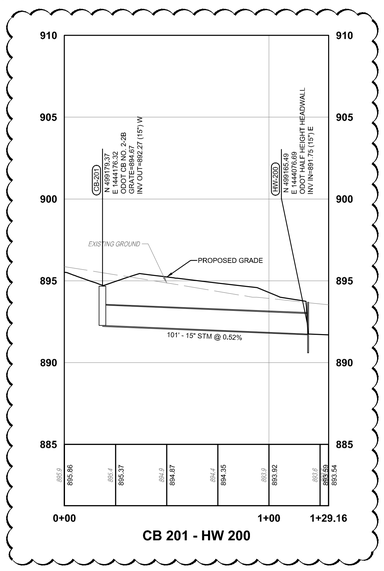
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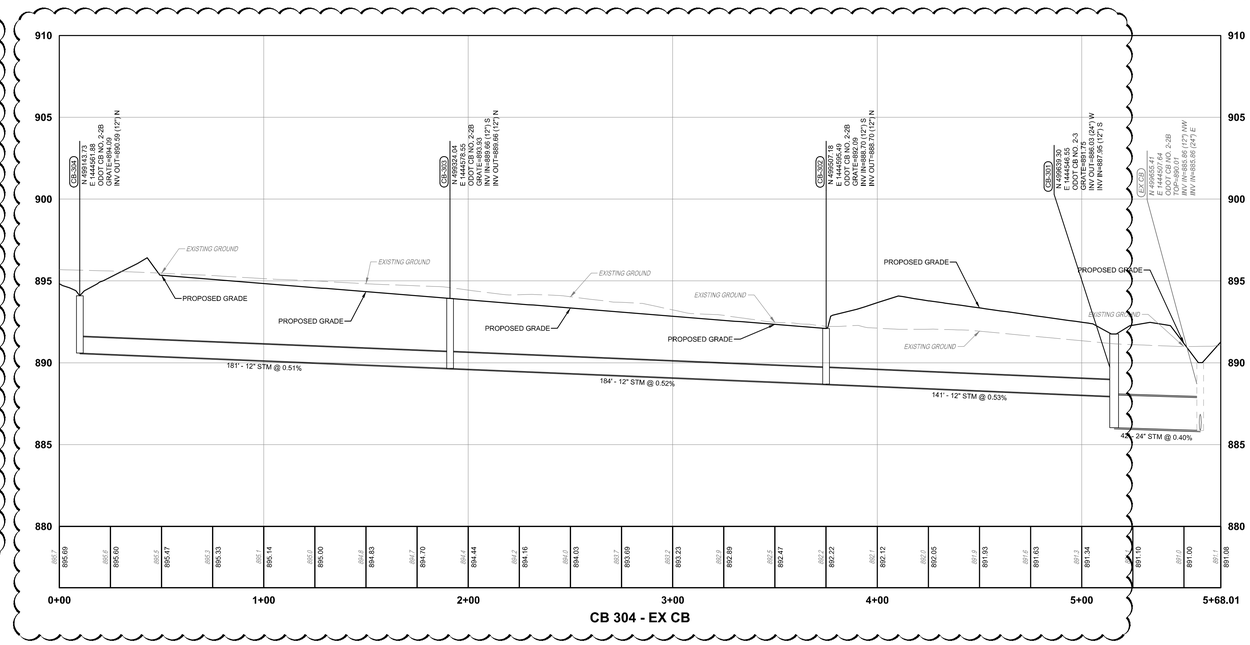


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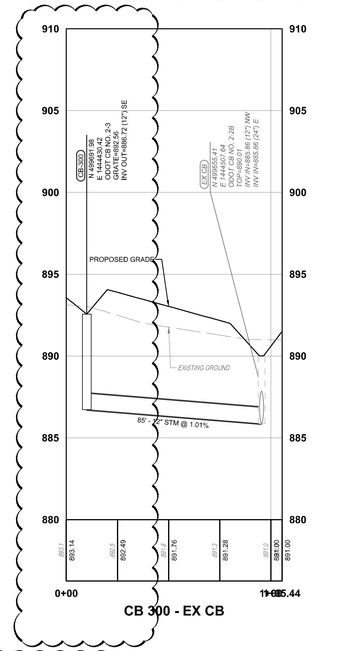
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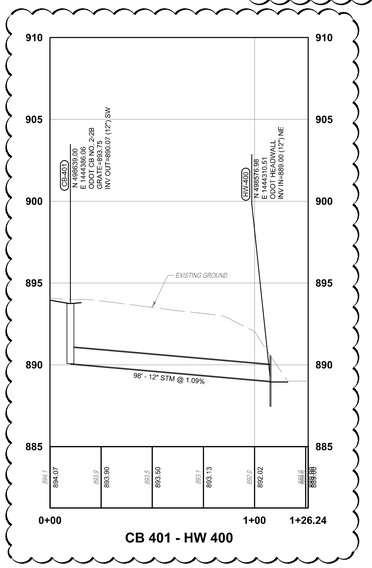
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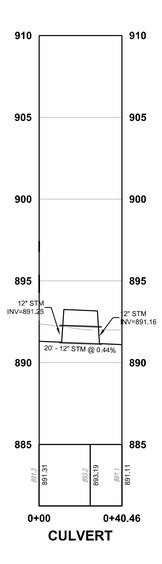
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GRADING PLAN

DATE 06/02/17

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GRADING LEGEND

- IF — FLEXSTORM INLET FILTER. SEE DETAIL 9/C100
- SF — SILT FENCE
- DRAINAGE ARROW
- CLEARING LIMITS

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Ex. Gravel Drive

Ex. Fence Line

Ex. Swale

Ex. Gravel Drive

Ex. Swale

Ex. Gravel Drive

PROPOSED FIELDHOUSE FF=900.50

MATCH LINE SEE SHEET C151

MATCH LINE SEE SHEET C151

MATCH LINE - SEE SHEET C150

MATCH LINE - SEE SHEET C150

MATCH LINE - SEE THIS SHEET



GRADING LEGEND

- IF — FLEXSTORM INLET FILTER. SEE DETAIL X/C100
- SF — SILT FENCE
- DRAINAGE ARROW

MATCH LINE - SEE THIS SHEET

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PROJECT DESCRIPTION
SITE RESTORATION AS A RESULT OF THE CONSTRUCTION OF A PROPOSED FIELD HOUSE INCLUDING PARKING LOTS AND ASSOCIATED UTILITIES.

PROJECT DATA
TOTAL SITE AREA: 258 AC
TOTAL DISTURBED AREA: 12.1 AC

PROPOSED IMPERVIOUS AREA: 5.9 AC
PERCENTAGE OF CREATED IMPERVIOUS AREA: 2.3%

RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION: C=0.35-0.90
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION*: C=0.35-0.90

PRIOR LAND USE: SOCCER FIELDS, OPEN SPACE

RECEIVING WATER: LITTLE MIAMI RIVER

ESTIMATED CONSTRUCTIONS DATES:

SOIL TYPES, DESCRIPTIONS: FINCASTLE SILT LOAM, SOUTHERN OHIO TILL PLAIN, RAGSDALEE SILTY CLAY LOAM, XENIA SILT LOAM

GENERAL NOTES

THE CONTRACTOR IS HEREBY ADVISED THAT STRICTER POLLUTION CONTROL STANDARDS AND ENFORCEMENT HAVE BEEN IMPOSED BY THE OHIO EPA. ALSO, MANY PRIVATE CITIZEN ENVIRONMENTAL GROUPS, WHO HAVE BEEN KNOWN TO FILE CIVIL LEGAL ACTIONS, ARE PRESENT IN THE AREA AND OBSERVE ALL CONSTRUCTION OPERATIONS.

THE CONTRACTOR SHALL INFORM ALL SUBCONTRACTORS OF THE REQUIREMENTS AND RESPONSIBILITIES OF THE SWPPP AND SHALL DOCUMENT ALL SUCH NOTIFICATIONS AND/OR DISCUSSIONS. ALL SUBCONTRACTORS SHALL SIGN THE NOI.

THE CONTRACTOR WILL BE REQUIRED TO PARTICIPATE IN SEDIMENT AND EROSION CONTROL INSPECTIONS ON A WEEKLY BASIS AND SIGN AN APPROVED INSPECTION SHEET THAT SHALL BE KEPT ON FILE AT THE JOB SITE.

UNLESS OTHERWISE NOTED, STANDARDS AND SPECIFICATIONS ESTABLISHED IN THE LATEST EDITION OF THE ODNR "RAINWATER AND LAND DEVELOPMENT" HANDBOOK SHALL GOVERN THE EROSION AND SEDIMENT CONTROL INSTALLATIONS SPECIFIED ON THIS PLAN.

THIS PROJECT WILL INVOLVE SEVERAL CONSTRUCTION PHASES AND SEQUENCING THROUGHOUT ITS LIFETIME. IT IS VERY IMPORTANT THAT ALL TEMPORARY SEDIMENT AND EROSION CONTROL (S&EC) FIELD METHODS ALONG WITH THIS PLAN, ARE UPDATED TO REFLECT THE ACTUAL FIELD CONDITIONS, CURRENT WEATHER CONDITIONS AND SITE GRADE CHANGES. THE CONTRACTOR, OWNER, ENGINEER OR THE OHIO EPA CAN AND WILL MODIFY THIS PLAN AS NECESSARY.

THE CONTRACTOR WILL VOLUNTARILY SELF REPORT ANY POTENTIAL VIOLATIONS OF THE OEPA NPDES PERMIT TO THE OWNER, ENGINEER AND THE OHIO EPA.

THE CONTRACTOR SHALL REMOVE EXISTING GROUND COVER ONLY AS NECESSARY FOR THE PROJECT PHASE CURRENTLY UNDER CONSTRICTION.

CONSTRUCTION AND DEMOLITION DEBRIS SHALL BE PROPERLY DISPOSED OF ACCORDING TO OHIO EPA REQUIREMENTS.

THE CONTRACTOR WILL BE REQUIRED TO BUILD SEDIMENT BASINS OR SEDIMENT TRAPS OR USE EQUAL METHODS TO DETAIN AND CLEAN WATER TO ACCEPTABLE EPA STANDARDS BEFORE RELEASING THE WATER BACK INTO THE STREAM.

THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS, RESULTING FROM DEWATERING ACTIVITIES. SEDIMENT-LADEN WATER MUST PASS THROUGH A SETTLING POND, FILTER BAG, OR OTHER COMPARABLE PRACTICE, PRIOR TO DISCHARGE.

NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.

ALL PROCESS WASTEWATER (EQUIPMENT WASHING, LEACHATE FROM ON-SITE WASTE DISPOSAL, ETC.) SHALL BE COLLECTED AND DISPOSED OF AT A PUBLICLY OWNED TREATMENT WORKS.

ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH ALL LOCAL EROSION/SEDIMENT CONTROL, WASTE DISPOSAL, SANITARY AND HEALTH REGULATIONS.

OTHER EROSION CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND IMPLEMENTATION OF ADDITIONAL EROSION CONTROL ITEMS, AT THE ENGINEER'S DISCRETION.

NO SOIL, ROCK, DEBRIS OR OTHER MATERIAL SHALL BE DUMPED OR PLACED IN ANY AREAS NOT ADEQUATELY PROTECTED BY EROSION CONTROL INSTALLATIONS.

IT IS PREFERRED TO USE PERMANENT EROSION CONTROL ITEMS AS SHOWN IN THE PLANS TO CONTROL CONSTRUCTION POLLUTION WHEN POSSIBLE. OTHERWISE, THE TEMPORARY POLLUTION PREVENTION ITEMS ARE TO BE USED.

MOST TEMPORARY S&EC METHODS, INCLUDING BUT NOT LIMITED TO, SILT FENCE AND DITCH CHECKS MAY ALL HAVE TO BE PERIODICALLY REMOVED AND REPLACED, OR MOVED FROM THE EXISTING ROAD DITCH OR STRIPPED AREAS AS WORK PROGRESSES. ANY CHANGES SHALL BE NOTED IN THE PLAN BY RED LINE AND DATED ON A CORRECTIVE ACTION LOG.

ALL TEMPORARY SEDIMENT CONTROLS AND STORM WATER QUALITY METHODS WILL BE BUILT/INSTALLED AS THE PROJECT PROGRESSES TO ELIMINATE UNNECESSARY DISTURBANCE AND REDUNDANCY. ALL TEMPORARY CONTROLS SHALL BE IN PLACE AND FUNCTIONING PROPERLY WHEN THREATENING WEATHER IS IMMINENT.

"TEMPORARY STABILIZATION" MEANS THE ESTABLISHMENT OF TEMPORARY VEGETATION, MULCHING, GEOTEXTILES, SOD, PRESERVATION OF EXISTING VEGETATION AND OTHER TECHNIQUES CAPABLE OF QUICKLY ESTABLISHING COVER OVER DISTURBED AREAS TO PROVIDE EROSION CONTROL BETWEEN CONSTRUCTION OPERATIONS.

"PERMANENT STABILIZATION" MEANS THE ESTABLISHMENT OF PERMANENT VEGETATION, DECORATIVE LANDSCAPE MULCHING, MATTING, SOD, RIP RAP AND LANDSCAPING TECHNIQUES TO PROVIDE PERMANENT EROSION CONTROL ON AREAS WHERE CONSTRUCTION OPERATIONS ARE COMPLETE OR WHERE NO FURTHER DISTURBANCE IS EXPECTED FOR AT LEAST A YEAR.

OFF-SITE TRACKING OF SEDIMENTS SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. ALL PAVED STREETS ADJACENT TO THE SITE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARP.

OPERATION SEQUENCE FOR TEMPORARY AND PERMANENT BMP INSTALLATION

TO COMPLETE THE EXCAVATION AND CONSTRUCTION OF THE PROPOSED JOB IMPROVEMENTS, COORDINATION OF THE CONTRACTOR'S WORK CREWS WILL BE REQUIRED. THE EXISTING DITCHES WILL PERFORM TEMPORARY SEDIMENT CONTROL AND STORAGE DURING THE PROPOSED CONSTRUCTION. WORK WILL GENERALLY PROCEED FROM DOWNSTREAM TO UPSTREAM IN THESE WORK AREAS. THE GENERAL CONSTRUCTION SEQUENCE IS AS FOLLOWS:

A) INSTALL EROSION CONTROL ITEMS.
B) STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL THROUGH THE INCREMENTAL WORK AREA.
C) INSTALL TEMPORARY DITCH CHECKS IN DOWNSTREAM END OF EXISTING DITCH WITHIN 24 HOURS FOLLOWING THE STRIPPING OPERATION.
D) IF U/G PIPE IS CALLED FOR IN THIS PORTION OF WORK AREA, PIPE CREW WILL INSTALL PIPE AS WELL AS MANHOLES.
E) AS PIPE INSTALLATION PROGRESSES, REPAIR OF THE ROADWAY WILL PROCEED BEHIND IT.
F) ANY DISTURBED OR EXPOSED AREAS SHALL BE STABILIZED PER OHIO EPA TEMPORARY AND PERMANENT STABILIZATION REGULATIONS INCLUDING:
1. SEEDING
2. DITCH MATTING
3. INLET PROTECTION
4. MULCHING
5. WATERING

STABILIZATION PRACTICES

PERMANENT SEEDING AND MULCHING STABILIZATION SHALL BE PROVIDED PER OHIO EPA GUIDELINES.

TABLE 1: PERMANENT STABILIZATION

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

TEMPORARY SEEDING AND MULCHING STABILIZATION SHALL BE PROVIDED PER OHIO EPA GUIDELINES,

TABLE 2: TEMPORARY STABILIZATION

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITH 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE	WITHIN SEVEN DAYS OF 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

ALL TEMPORARY EROSION AND SEDIMENT CONTROL INSTALLATIONS SHALL BE REMOVED WHEN 70% VEGETATION HAS BEEN REACHED.

SEEDING & MULCHING

MULCH AND/OR OTHER APPROPRIATE VEGETATIVE PRACTICES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREA IS TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 14 DAYS OR ON AREAS AND PORTIONS OF THE SITE WHICH CAN BE BROUGHT TO FINAL GRADE.

MULCH SHALL CONSIST OF UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 3 TONS/AC. OR 138 LB./1000 SQ. FT. (TWO TO THREE BALES). THE STRAW MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1000-SQ.-FT. SECTIONS AND PLACE THREE 45-LB. BALES OF STRAW IN EACH SECTION.

MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR RUNOFF. THE FOLLOWING ARE ACCEPTABLE METHODS FOR ANCHORING MULCH:
1) MECHANICAL-USE A DISK, CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT BE LEFT GENERALLY LONGER THAN 6 IN.
2) MULCH NETTINGS-USE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, FOLLOWING ALL PLACEMENT AND ANCHORING SUGGESTIONS. USE IN AREAS OF WATER CONCENTRATION AND STEEP SLOPES TO HOLD MULCH IN PLACE.
3) ASPHALT EMULSION-FOR STRAW MULCH, APPLY AT THE RATE OF 160 GAL./AC. (0.1 GAL./SY) INTO THE MULCH AS IT IS BEING APPLIED OR AS RECOMMENDED BY THE MANUFACTURE.
4) SYNTHETIC BINDERS-FOR STRAW MULCH, SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.

TEMPORARY SEEDING & MULCHING FOR EROSION CONTROL

SEED TYPE	PER 1000 SQ FT	PER ACRE
PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	1 POUND 1 POUND 1 POUND	40 POUNDS 40 POUNDS 40 POUNDS
SMALL GRAIN STRAW	90 POUNDS	2 TONS
FERTILIZER	6 POUNDS OF 10-10-10 OR 12-12-12	250 POUNDS OF 10-10-10 OR 12-12-12

NOTE: OTHER APPROVED SPECIES MAY BE SUBSTITUTED

WINTER SEEDING & MULCHING

WINTER SEED AND MULCH IS REQUIRED FOR EARTH DISTURBANCE ACTIVITY OPERATIONS OCCURRING BETWEEN OCTOBER 15 AND MARCH 15 AND CAN ONLY BE INSTALLED DURING THAT TIME. ALL STRAW MULCH INCLUDED IN THIS WORK MUST BE EITHER CRIMPED IN PLACE OR INSTALLED WITH A BIODEGRADABLE BONDED FIBER MATRIX. CRIMPED MULCH IS REQUIRED TO BE ANCHORED INTO THE SOIL SURFACE WITH A MECHANICAL CRIMPING IMPLEMENT OR OTHER SUITABLE IMPLEMENT APPROVED BY THE ENGINEER. THE MULCH INCLUDED IN THIS WORK MUST BE CAPABLE OF PROVIDING SUFFICIENT DURABLE PROTECTIVE COVER THAT PROVIDES OHIO EPA NPDES PERMIT COMPLIANT EROSION CONTROL FOR A MINIMUM OF 6 MONTHS. THE USE OF OTHER SEED AND/OR MULCH MATERIALS IN THIS TIME PERIOD REQUIRES SPECIFIC APPROVAL BY THE ENGINEER. THE USE OF WINTER SEEDING AND MULCHING IS NOT AN ACCEPTABLE PRACTICE FOR PROTECTING THE SUBGRADE SURFACE.

STOCKPILE

SILT FENCING SHALL BE INSTALLED AROUND TEMPORARY SPOIL STOCKPILES. THESE STOCKPILES SHALL BE STRAW MULCHED AND/OR TEMPORARILY SEEDED WITHIN 7 WORKING DAYS IF LEFT DORMANT FOR 14 DAYS OR LONGER.

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, CONSTRUCTION ENTRANCE(S) AND SILT FENCE WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. SEDIMENT CONTROL DEVICES SHALL BE IMPLEMENTED FOR ALL AREAS REMAINING DISTURBED LONGER THAN 14 DAYS AND/OR WITHIN 7 DAYS OF ANY GRUBBING ACTIVITIES. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 14 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 2 DAYS OF THE LAST DISTURBANCE IF THE AREA IS WITHIN 50 FEET OF A STREAM, AND WITHIN 7 DAYS OF THE LAST DISTURBANCE IF THE AREA IS MORE THAN 50 FEET AWAY FROM A STREAM. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT SEED AND MULCH. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE BASIN.

STABILIZATION TYPE	J	F	M	A	M	J	J	A	S	O	N	D
PERMANENT SEEDING			●	●	●	*	*	*	●	●		
DORMANT SEEDING	●	●	●							●	●	●
TEMPORARY SEEDING			●	●	●	*	*	*	●	●		
SODDING			**	**	**	**	**	**	**			
MULCHING	●	●	●	●	●	●	●	●	●	●	●	●

* - IRRIGATION NEEDED
** - IRRIGATION NEEDED FOR 2-3 WEEKS AFTER SOD IS APPLIED

INSPECTIONS

ALL BMPS ON THIS SITE SHALL BE INSPECTED BY THE CONTRACTOR OR DESIGNATED REPRESENTATIVE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES PER 24 HOUR PERIOD. A RECORD OF THESE INSPECTIONS SHALL BE MAINTAINED IN THE CONSTRUCTION OFFICE WITH THE SWPPP FOR PUBLIC VIEWING. ANY VIOLATIONS WILL BE REPORTED THROUGH THE PROJECT PERSONNEL. A RAIN GAUGE WILL BE LOCATED WITHIN THE PROJECT LIMITS.

FOLLOWING EACH INSPECTION, A CHECKLIST MUST BE COMPLETED AND SIGNED BY THE QUALIFIED INSPECTION PERSONNEL REPRESENTATIVE. AT A MINIMUM, THE INSPECTION REPORT SHALL INCLUDE:

1. THE INSPECTION DATE;
2. NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION;
3. WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF ONSTRUCTION ACTIVITY IF THE FIRST INSPECTION) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES), AND WHETHER ANY DISCHARGES OCCURRED;
4. WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING AT THE TIME OF THE INSPECTION;
5. LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE;
6. LOCATION(S) OF BMPS THAT NEED TO BE MAINTAINED;
7. LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;
8. LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND
9. CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO THE SWP3 NECESSARY AND IMPLEMENTATION DATES.

THE PERMITTEE SHALL MAINTAIN A RECORD OF ALL INSPECTIONS FOR A PERIOD OF 3 YEARS FOLLOWING THE SUBMITTAL OF THE NOTICE OF TERMINATION.

MAINTENANCE

THE CONTRACTOR SHALL MAINTAIN, REPAIR, OR REPLACE ALL EROSION CONTROL INSTALLATIONS AS NEEDED TO ENSURE THE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL REPAIRS TO BMPS SHALL BE MADE WITHIN 3 DAYS (OR SOONER IF POSSIBLE) OF NOTIFICATION OF DEFICIENCIES. IF THE CORRECTIONS ARE NOT MADE WITHIN THE 3 DAY PERIOD, LIQUIDATED DAMAGES MAY BE ASSESSED.

ONGOING INSPECTION OF INSTALLATIONS WILL BE PERFORMED BY THE CONTRACTOR OR DESIGNATED REPRESENTATIVE.

ANY TRAPPED SEDIMENT OR DEBRIS REMOVED DURING CLEANING OF OR REMOVAL OF BMP INSTALLATIONS SHALL BE PLACED IN AREAS NOT SUBJECT TO EROSION AND PERMANENTLY STABILIZED.

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES:

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING:

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

1. AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
2. ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
3. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
4. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
5. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
6. MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
7. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.

HAZARDOUS PRODUCTS:

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

1. PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
2. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
3. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS' OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

1. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY. MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
2. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
3. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
4. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE. SPILLS OF 25 OR MORE GALLONS OF PETROLEUM WASTE MUST BE REPORTED TO OHIO EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF THE SPILL.
5. SOILS CONTAMINATED BY PETROLEUM OR OTHER CHEMICAL SPILLS MUST BE TREATED/DISPOSED AT A OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITY OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITY (TSDF).
6. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
7. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE WILL DESIGNATE SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS - ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FUEL STORAGE TANKS SHALL BE LOCATED AWAY FROM SURFACE WATERS AND STORM SEWER SYSTEM INLETS. FUEL TANKS SHALL BE STORED IN A DIKED AREA CAPABLE OF HOLDING 150% OF THE TANK CAPACITY.

FERTILIZERS - FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

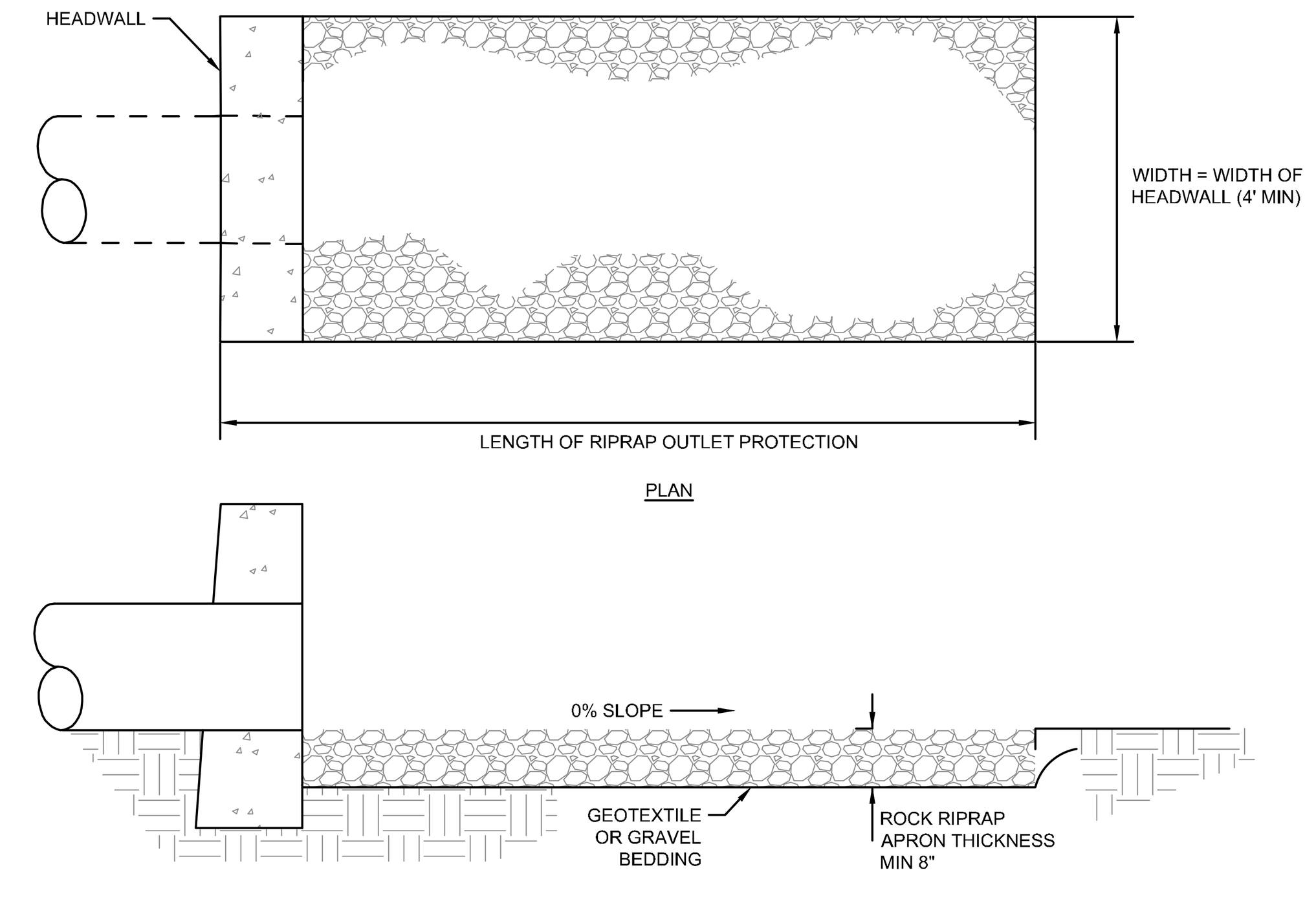
PAINTS - ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

DUST CONTROL

DUST CONTROL INVOLVES PREVENTING OR REDUCING DUST FROM EXPOSED SOILS OR OTHER SOURCES DURING LAND DISTURBING, DEMOLITION AND CONSTRUCTION ACTIVITIES TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.

THE FOLLOWING SPECIFICATIONS FOR DUST CONTROL SHALL BE FOLLOWED ONSITE:

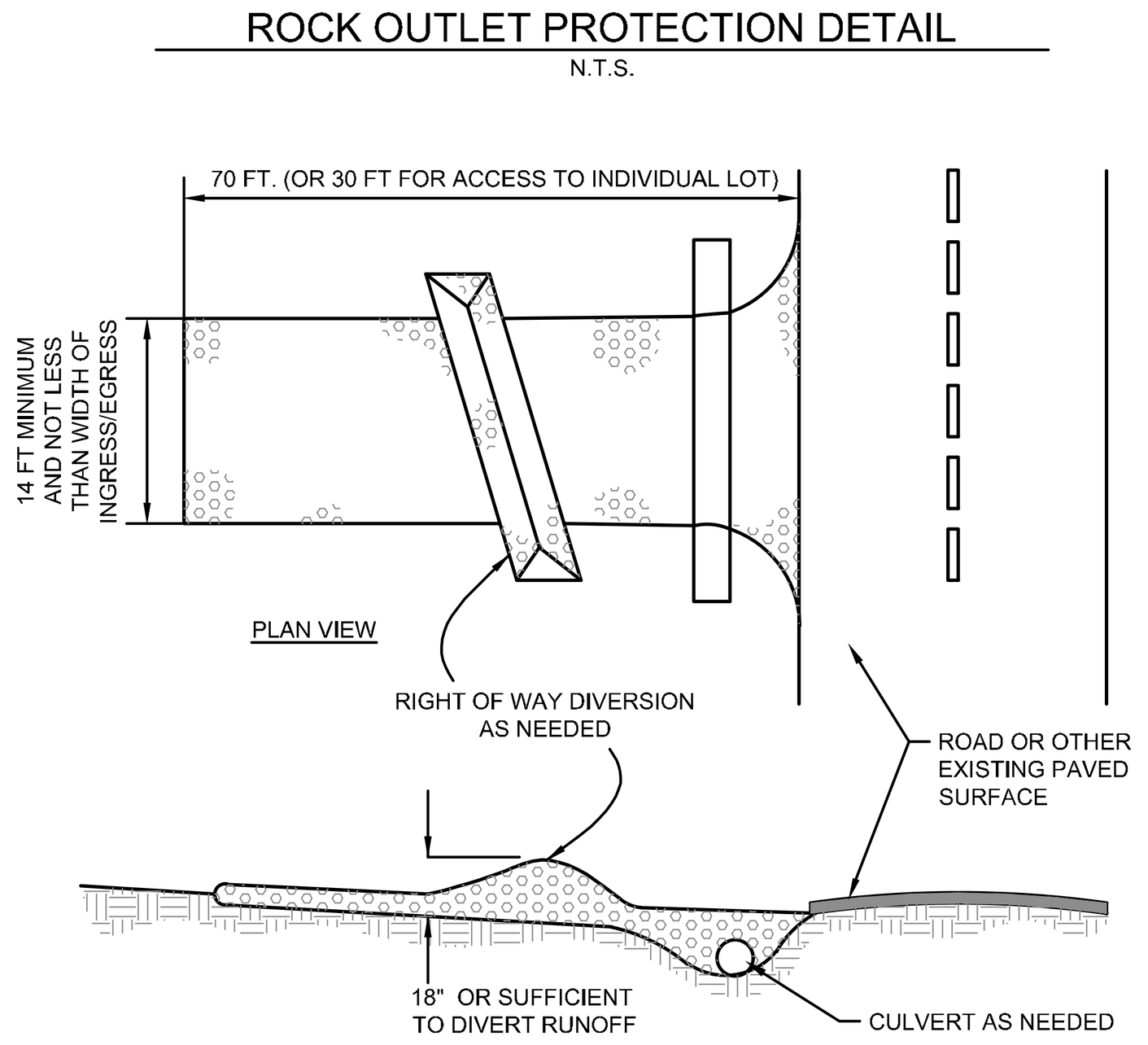
1. VEGETATIVE COVER AND/MULCH - APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 14 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING; PERMANENT SEEDING; MULCHING PRACTICES; AND TREE 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.



NOTES:

1. SUBGRADE FOR THE FILTER OR BEDDING AND RIPRAP SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES AS SHOWN ON THE PLAN. THE SUBGRADE SHALL BE CLEARED OF ALL TREES, STUMPS, ROOTS, SOD, LOOSE ROCK, OR OTHER MATERIAL.
2. RIPRAP SHALL CONFORM TO THE GRADING LIMITS AS SHOWN ON THE PLAN.
3. GEOTEXTILE SHALL BE SECURELY ANCHORED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
4. GEOTEXTILE SHALL BE LAID WITH THE LONG DIMENSION PARALLEL TO THE DIRECTION OF FLOW AND SHALL BE LAID LOOSELY BUT WITHOUT WRINKLES AND CREASES. WHERE JOINTS ARE NECESSARY, STRIPS SHALL BE PLACED TO PROVIDE A 12-IN. MINIMUM OVERLAP, WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP.
5. GRAVEL BEDDING SHALL BE ODOT NO. 67'S OR 57'S UNLESS SHOWN DIFFERENTLY ON THE DRAWINGS.
6. RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT SLIPPAGE OR DAMAGE TO THE GEOTEXTILE.
7. RIPRAP SHALL BE PLACED BY A METHOD THAT DOES NOT CAUSE SEGREGATION OF SIZES. EXTENSIVE PUSHING WITH A DOZER CAUSES SEGREGATION AND SHALL BE AVOIDED BY DELIVERING RIPRAP NEAR ITS FINAL LOCATION WITHIN THE CHANNEL.
8. CONSTRUCTION SHALL BE SEQUENCED SO THAT OUTLET PROTECTION IS PLACED AND FUNCTIONAL WHEN THE STORM DRAIN, CULVERT, OR OPEN CHANNEL ABOVE IT BECOMES OPERATIONAL.
9. ALL DISTURBED AREAS WILL BE VEGETATED AS SOON AS PRACTICAL.

ROCK OUTLET PROTECTION DETAIL
N.T.S.



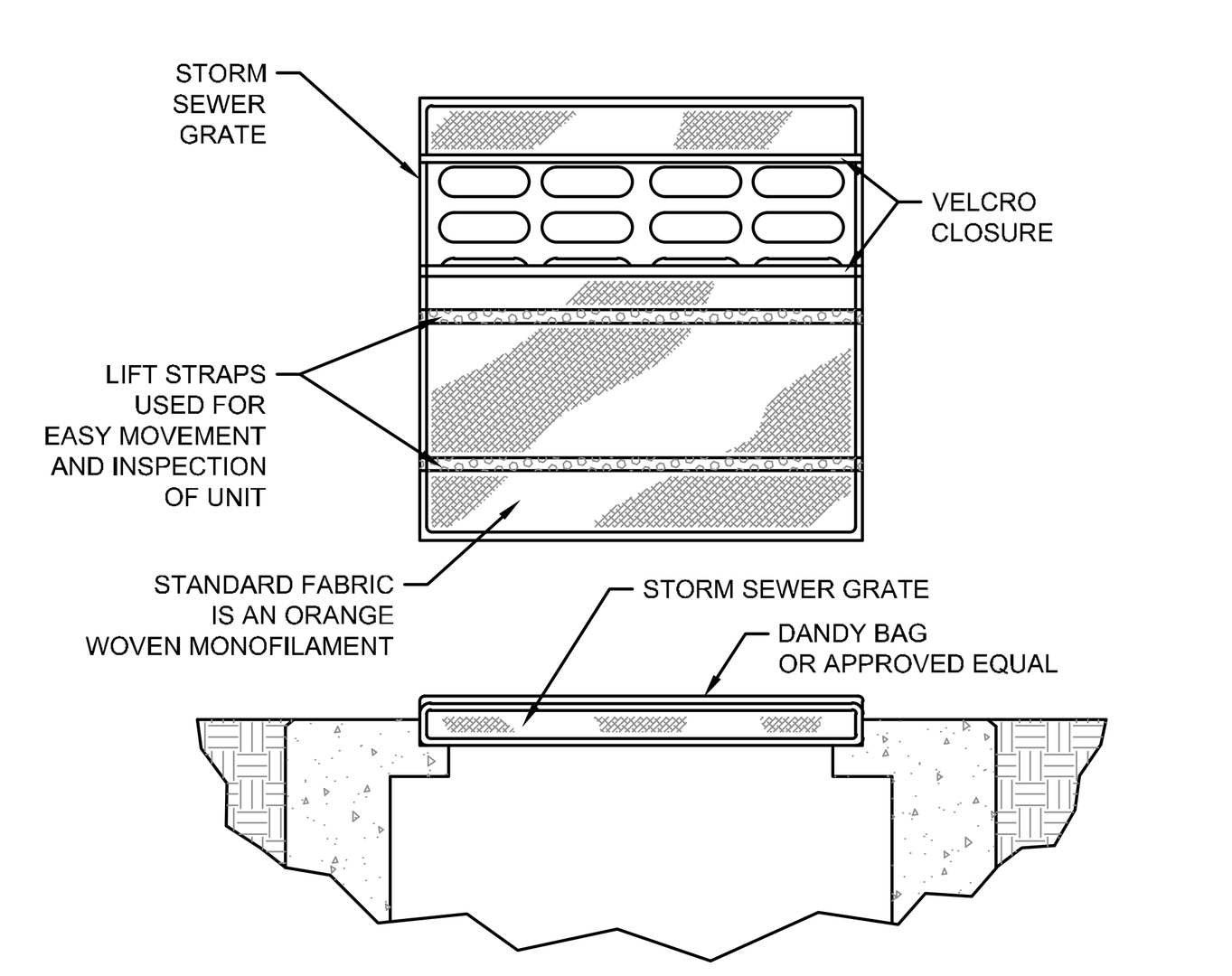
NOTES

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 ARE PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

MINIMUM TENSILE STRENGTH	200 LBS
MINIMUM PUNCTURE STRENGTH	80 LBS
MINIMUM TEAR STRENGTH	50 LBS
MINIMUM BURST STRENGTH	320 PSI
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	EOS< 0.6MM
PERMITTIVITY	$1X10^{-3}$ 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 NEED ED 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 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES. 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 REMOVE 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.

CONSTRUCTION ENTRANCE DETAIL
N.T.S.



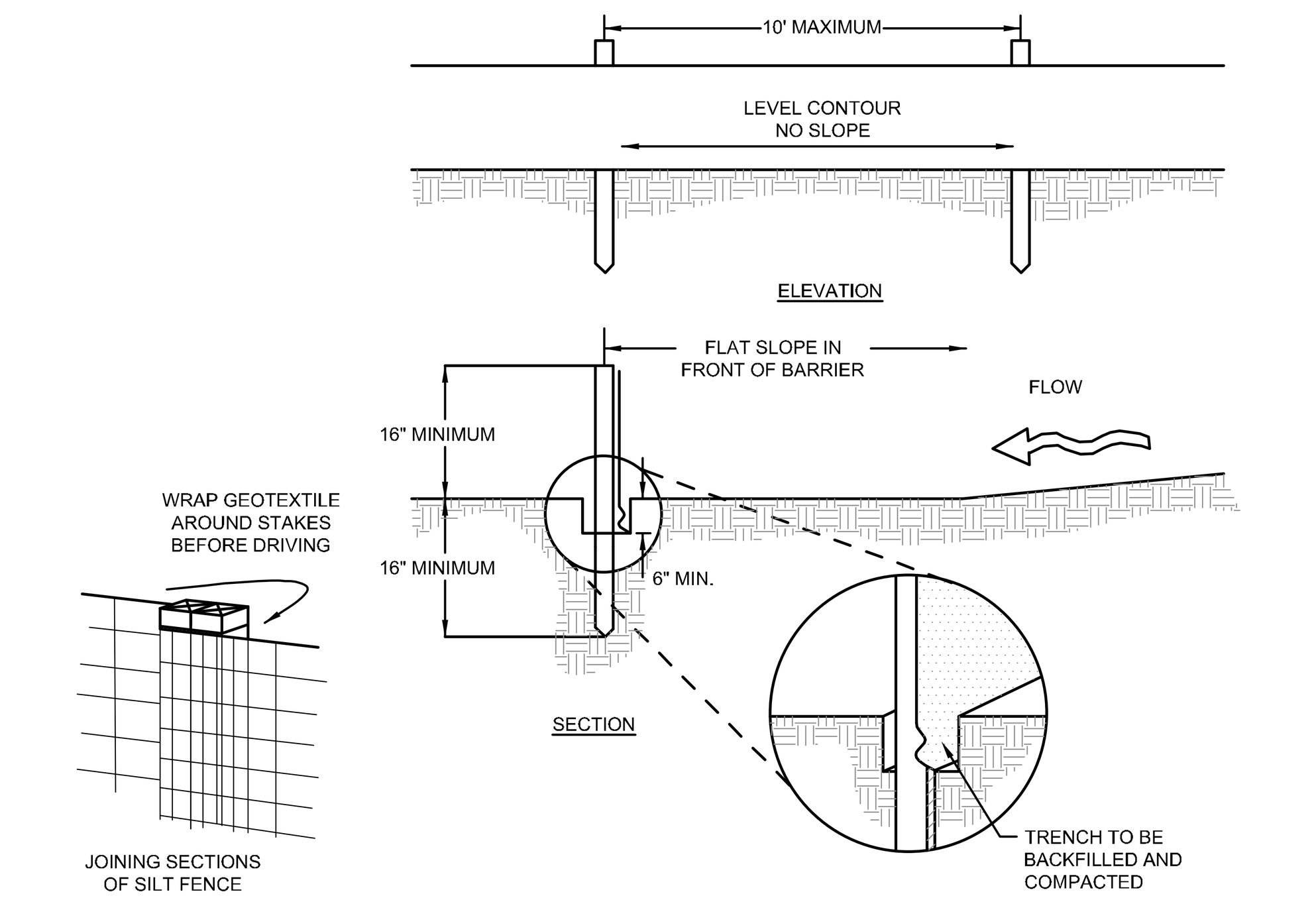
SPECIFICATIONS

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	KN (LBS)	1.62 (365) X 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 X 10
PUNCTURE STRENGTH	ASTM D 4833	KN (LBS)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	KPA (PSI)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	KN (LBS)	0.51 (115) X 0.33 (75)
UV RESISTENCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	MM (US STD SIEVE)	0.425 (40)
FLOW RATE	ASTM D 4491	$1/MIN/M^2$ ($GAL/MIN/FT^2$)	5907 (145)
PERMITTIVITY	ASTM D 4491	SEC^{-1}	2.1

INSTALLATION: THE EMPTY DANDY BAG SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END. IF USING OPTIONAL OIL ABSORBENTS: PLACE ABSORBENT PILLOW IN POUCH, ON THE BOTTOM (BELOW-GRADE SIDE) OF THE UNIT. ATTACH ABSORBENT PILLOW TO TETHER LOOP. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT. REMOVE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE DANDY BAG AS NEEDED. IF USING OPTIONAL OIL ABSORBENTS; REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.

DANDY BAG DETAIL
N.T.S.



NOTES:

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 THAT MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
4. SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
5. 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.
6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
7. THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
9. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-IN. OVERLAP PRIOR TO DRIVING INTO THE GROUND.
10. MAINTENANCE—SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER THE FABRIC OR AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, 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.

SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE.

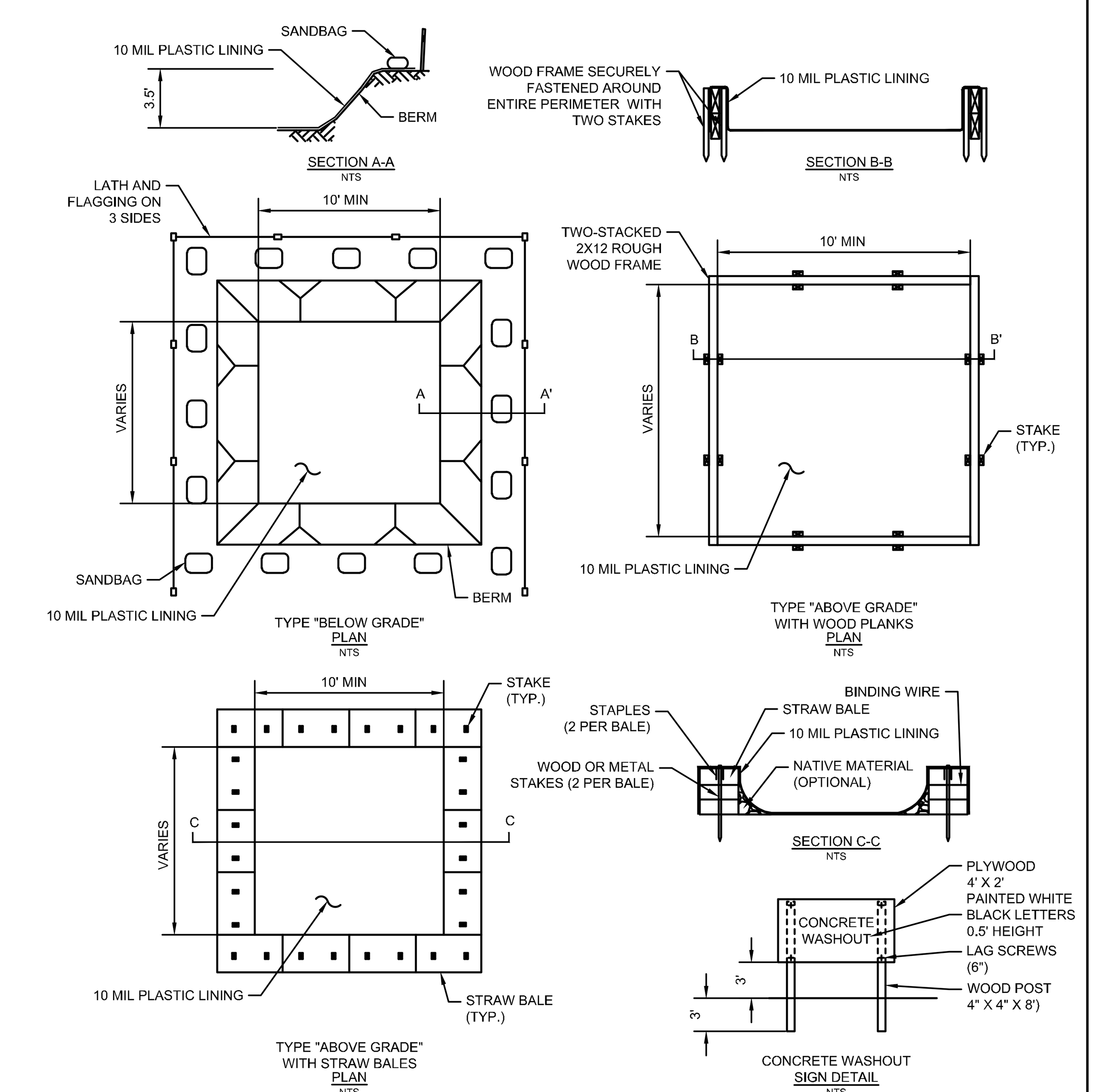
SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

CRITERIA FOR SILT FENCE MATERIALS

1. FENCE POST – THE LENGTH SHALL BE A MINIMUM OF 32 INCHES. WOOD POSTS WILL BE 2-BY-2-IN. NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS, THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINIMUM 16 INCHES INTO THE GROUND, WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
2. SILT FENCE FABRIC – SEE CHART BELOW.

FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS. (535 N)	ASTM D 4632
MAXIMUM ELONGATION AT 60 LBS	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS. (220 N)	ASTM D 4833
MINIMUM TEAR STRENGTH	40 LBS. (180 N)	ASTM D 4533
APPARENT OPENING SIZE	<0.84 MM	ASTM D 4751
MINIMUM PERMITTIVITY	1X10-2 SEC-1	ASTM D 4491
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4355

SILT FENCE DETAIL
N.T.S.



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

CONCRETE WASHOUT DETAIL
N.T.S.

0'-1" REFERENCE LINE

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4805 Montgomery Road
Cincinnati, Ohio 45212
Suite 400
513-381-2112

250 Civic Center Drive
Columbus, Ohio 43215
Suite 200
614-223-2124

223 Fairfield Avenue
Bellevue, Kentucky 41073
Suite 1
859-360-1234

SHP
LEADING DESIGN

CONGER
CONSTRUCTION GROUP

FIELD HOUSE
VOA METROPARK FIELD HOUSE
7850 VOA PARK DR., WEST CHESER, OHIO 45069
METROPARKS OF BUTLER COUNTY
2051 TIMBERMAN RD. HAMILTON, OH 45013

ISSUANCES

1	06.02.17	BID AND PERMIT SET
2	06.14.17	BID AND PERMIT SET REV.

EROSION CONTROL NOTES & DETAILS

DATE 06/02/17

COMM NO. 2014000.00

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