CONTACT INFORMATION

PERMITTEE:
BOHLER ENGINEERING
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212

OWNER:
TIDAL WAVE AUTO SPA
115 E. MAIN STREET, PO DRAWER 311
THOMASTON, GA 30286

DEVELOPER:
NEW POTATO CREEK HOLDING, LLC
C/O PJ LAND DEVELOPMENT, LLC
71 CAROLYN BOULEVARD, FARMINGDALE, NY 11735

PROJECT DESCRIPTION

PJ LAND DEVELOPMENT, LLC IS PROPOSING TO DEVELOP A LOT IN THE BRIDGEWATER LANDINGS DEVELOPMENT LOCATED AT 3003 BRIDGEWATER LANDINGS DRIVE, FAIRFIELD TOWNSHIP, BUTLER COUNTY, OH INTO A 3,610 SF TIDAL WAVE AUTO SPA AND CLEANING FACILITY. THE PARCEL IS CURRENTLY VACANT WITH NO EXISTING STRUCTURES ON SITE AND CONSISTS PRIMARILY OF MEADOW AREA. THE PROPOSAL INCLUDES THE INSTALLATION OF THE TIDAL WAVE AUTO SPA CAR WASH FACILITY, PARKING LOT, UTILITIES, LANDSCAPING, AND STORMWATER MANAGEMENT CONTROLS NECESSARY TO SUPPORT THE DEVELOPMENT.

PROJECT DATA

TOTAL SITE AREA:	1.15 ACRES
TOTAL DISTURBED AREA:	0.99 ACRES
EXISTING IMPERVIOUS AREA:	0.00 ACRES
PROPOSED IMPERVIOUS AREA:	0.77 ACRES
PERCENTAGE OF PROPOSED IMPERVIOUS AREA:	66.7%
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION:	0.23 (POI #1)
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION:	0.88 (POI #1)
WATER QUALITY VOLUME:	0.076 AC-FT
PRIOR LAND USE:	VACANT, UNDEVELOPED
RECEIVING WATER:	GREAT MIAMI RIVER (LOWER)
ESTIMATED CONSTRUCTION DATES:	SPRING 2023 - FALL 2023
SOIL TYPES DESCRIPTION:	

SITE SOIL DATA		
MAP UNIT SYMBOL OF SOIL	MAP UNIT NAME OF SOIL	HYDROLOGIC RATING
DaB	DANA SILT LOAM, 2-6% SLOPES	C
WyB2	WYNN SILT LOAM, 2-6% SLOPES	C

EMERGENCY CONTACT NUMBERS

TITLE	NAME	PHONE NUMBER
VP OF CONSTRUCTION	MICHAEL PIMENTAL	866-571-4609

PLANNED UNIT DEVELOPMENT PLANS

FOR

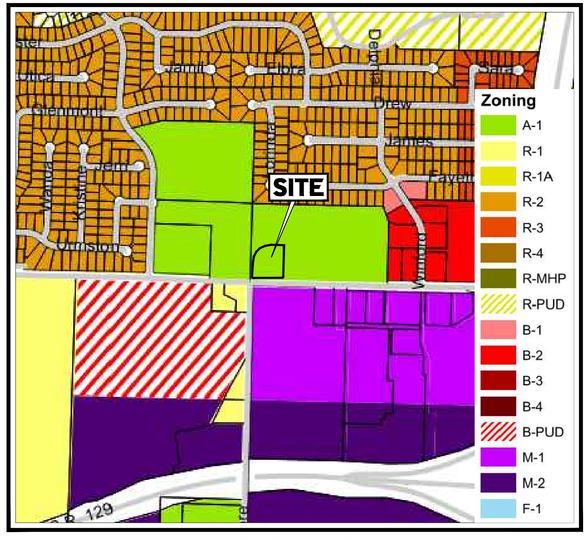
TIDAL WAVE AUTO SPA

CAR WASH

LOCATION OF SITE
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BULTER COUNTY, OHIO
T.M.P.#: A0300172000005

APPROVED
ERIC POTTENGER , 7/7/2023, 1:48:42 PM

BSW-LC23-00460
BLD-CT23-02217



ZONING MAP
SCALE: 1" = 660'
SOURCE: FAIRFIELD TOWNSHIP ZONING DEPARTMENT



LOCATION MAP
SCALE: 1" = 200'
SOURCE: GOOGLE MAPS

DRAWING SHEET INDEX

SHEET TITLE	SHEET NUMBER
COVER SHEET	C-101
SITE PLAN	C-301
SIGNAGE PLAN	C-302
SIGNAGE DETAIL	C-303
GRADING PLAN	C-401
UTILITY PLAN	C-501
SOIL EROSION & SEDIMENT POLLUTION CONTROL PLAN	C-601
SOIL EROSION & SEDIMENT POLLUTION CONTROL NOTES & DETAILS	C602, C-603
LIGHTING PLAN	C-701
LANDSCAPE PLAN	C-702
LANDSCAPE DETAILS	C-703
PROFILES PLAN	C-801, C-802
DETAILS	C-901, C-902, C-903
BUTLER COUNTY WATER & SEWER DETAILS	C-904
ODOT CURB RAMP DETAILS	C-905

PLAN REVISION SCHEDULE

CHANGE #	PREPARED BY	DESCRIPTION OF CHANGE	PAGE #	APPROVED BY	DATE

PREPARED BY

BOHLER

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABILITY CONSULTING
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

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2	08/25/2022	PER CLIENT COMMENTS	CCP / KJB
3	11/30/2022	PER ARCH REVISIONS	CCP / KJB
4	02/07/2023	PER ARCH REVISIONS	CCP / KJB
5	04/07/2023	PER TOWNSHIP COMMENTS	CCP / LRB
6	05/22/2023	PER CLIENT COMMENTS	CCP / LRB
7	05/30/2023	PER CLIENT COMMENTS	CCP / LRB
8	06/21/2023	PER COUNTY COMMENTS	CCP / LRB

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PROJECT No.:	PAD220070.00
DRAWN BY:	CCP
CHECKED BY:	KJB
DATE:	07/29/2022
CAD I.D.:	PAD220070.00-CNDS-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212
Phone: (724) 638-8500
www.BohlerEngineering.com

STATE OF OHIO
MICHAEL T. PIMENTAL
EXPIRES: 12/31/2023
REGISTERED LANDSCAPE ARCHITECT
REVIEWED BY LA 2101558
PENNSYLVANIA 415694
OHIO 2101558
MINNESOTA 55500

SHEET TITLE:

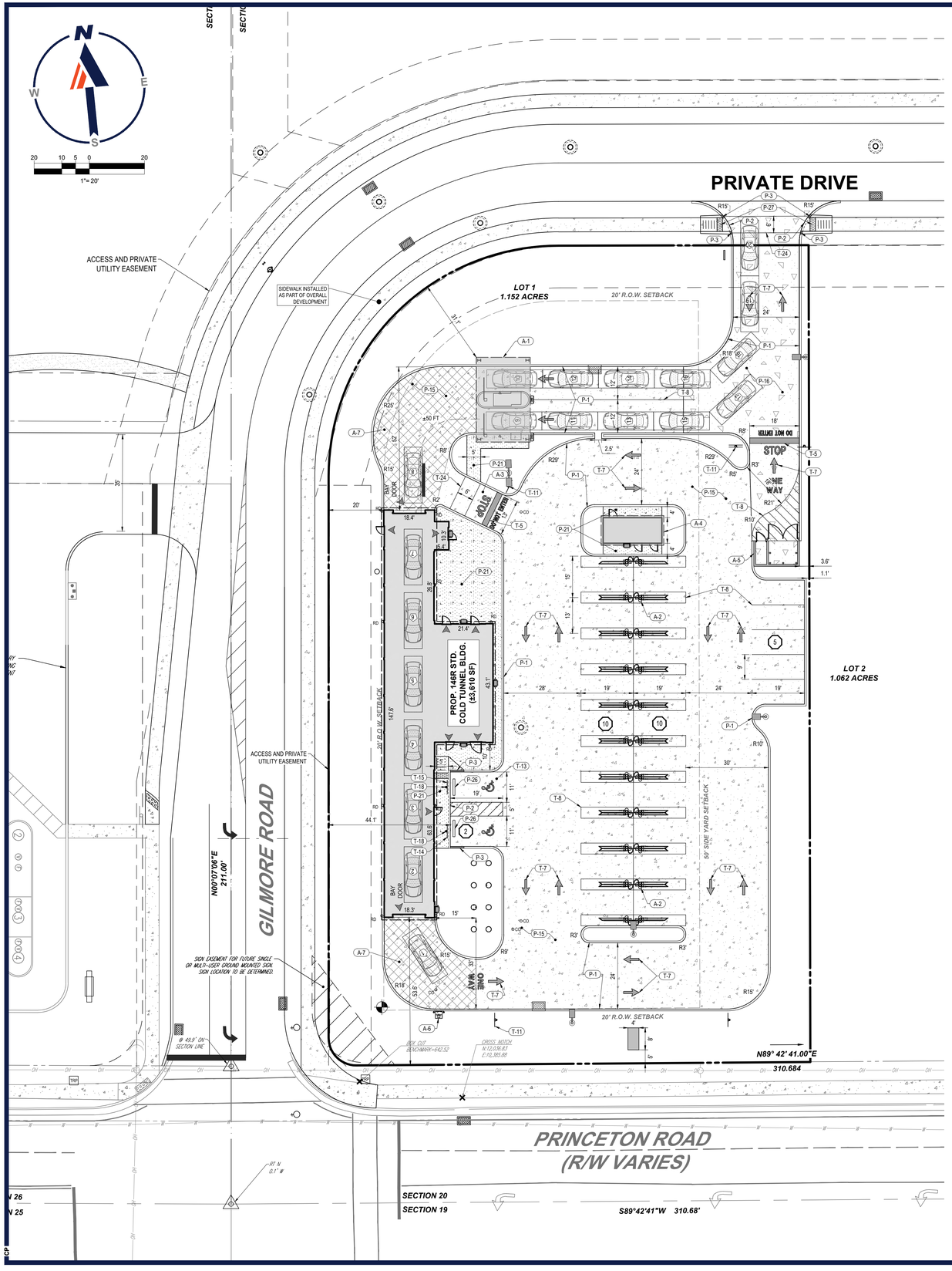
COVER SHEET

SHEET NUMBER:

C-101

REVISION 8 - 06/21/2023

I:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-CNDS-8B_---LAYOUT: C-101 COVER
CP



SITE LAYOUT NOTES

(Rev. 1/2020)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. PRIOR TO THE COMMENCEMENT OF GENERAL CONSTRUCTION, THE CONTRACTOR MUST INSTALL SOIL EROSION CONTROL AND ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH BUTLER COUNTY STORM WATER DISTRICT GUIDELINES TO PREVENT SEDIMENT AND/OR LOOSE DEBRIS FROM WASHING ONTO ADJACENT PROPERTIES OR THE RIGHT OF WAY.
3. ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY APPLICABLE STATE OR LOCALLY APPROVED SUPPLEMENTS, GUIDELINES, RULES, REGULATIONS, STANDARDS AND THE LIKE.
4. THE LOCATIONS OF PROPOSED UTILITY POLES AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC AND PRELIMINARY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING THEIR LOCATION. THE CONTRACTOR MUST COORDINATE THE RELOCATION OF TRAFFIC SIGNS WITH THE BUTLER COUNTY ENGINEER'S OFFICE.
5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE, STAKE OUT OF LOCATIONS OF INLETS, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS, UNLESS NOTED CLEARLY OTHERWISE.

SITE SPECIFIC NOTES

(Rev. 1/2020)

1. PROPERTY OWNER:
   JSR LAND COMPANY LLC
   8814 MONTGOMERY ROAD, CINCINNATI, OH 45236
2. EXISTING PROPERTY INFORMATION:
   TPNA0300172000002
   3100 PRINCETON ROAD, HAMILTON, OH 45011
   ZONED B-PUD
3. APPLICANT/EQUITABLE OWNER:
   NEW POTATO CREEK HOLDING, LLC
   C/O P.I.LAND DEVELOPMENT, LLC
   71 CAROLYN BOULEVARD, FARMINGDALE, NY 11735
   (631) 449-3791
4. HORIZONTAL DATUM IS BASED ON OHIO STATE PLANE SOUTH COORDINATES, NAD 83. VERTICAL DATUM IS NAVD 1988.
5. BY GRAPHIC PLOTTING ONLY, THE PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 39017C0194E, EFFECTIVE 12/17/2010.
6. ALL CURB AND PAVEMENT RADII ARE 5', UNLESS OTHERWISE NOTED.
7. ALL PROPOSED PINS AND MONUMENTS SHALL BE PLACED AND CERTIFIED BY A LICENSED OHIO PROFESSIONAL SURVEYOR.

REFERENCES AND CONTACT INFORMATION

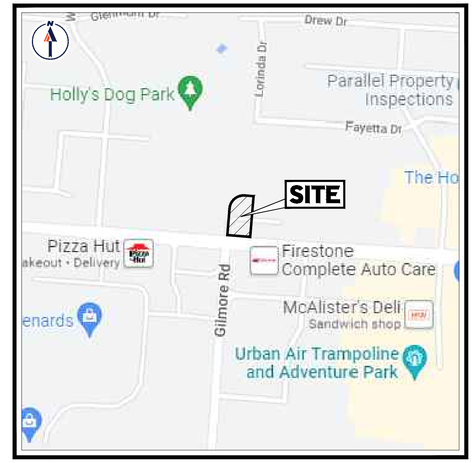
1. BASE PLANS:
   PLANS BY THE KLEINGERS GROUP
   6305 CENTRE PARK DRIVE, WEST CHESTER, OH 45069
   ENTITLED: "BRIDGEWATER CHURCH BPUD"
   FILE NO: 180075.002
   DATED: 05/16/22, NO REVISION
   SHEETS 1-3 OF 3
2. GEOTECHNICAL REPORT:
   A REPORT BY CONSULTING SERVICES INCORPORATED
   11785 HIGHWAY DRIVE, SUITE 100-B, CINCINNATI, OH 45241
   ENTITLED: "GEOTECHNICAL REPORT"
   PROJECT: "FAIRFIELD TOWNSHIP MULTI-COMMERCIAL RETAIL"
   DATED 04/25/22, NO REVISION
3. ENVIRONMENTAL REPORT:
   A REPORT BY APEX COMPANIES, LLC
   4701 CREEK ROAD, SUITE 100, CINCINNATI, OH 45242
   ENTITLED: "PHASE I ENVIRONMENTAL SITE ASSESMENT"
   FILE NO: BA5014-0313012-22003667
   DATED 02/24/22, NO REVISION
4. ARCHITECT:
   SBLM
   33 WALT WHITMAN ROAD, SUITE 300A, HUNTINGTON STATION, NY 11746
   (631) 683-5588

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.

LEGEND

PROPOSED FEATURES

A-1	DUAL LANE PAY KIOSK W/ 18' X 26' CANOPY (DESIGNED BY OTHERS).
A-2	BOOM VACUUMS (DESIGNED BY OTHERS).
A-3	CAN NOT WASH LANE.
A-4	DOUBLE VACUUM BUILDING (DESIGNED BY OTHERS).
A-5	TRASH ENCLOSURE 10' X 16' (DESIGNED BY OTHERS).
A-6	EXIT LIGHT (DESIGNED BY OTHERS).
A-7	SNOW MELT AREA.
P-1	TYPICAL CONCRETE CURB.
P-2	TYPICAL FLUSH CONCRETE CURB.
P-3	TAPERED CURB.
P-15	LIGHT DUTY CONCRETE PAVEMENT.
P-16	HEAVY DUTY CONCRETE PAVEMENT.
P-21	CONCRETE SIDEWALK.
P-26	CONCRETE WHEEL STOPS.
P-27	ODOT TYPE A2 CURB RAMP.
T-5	24" WHITE PAINTED STOP BAR & STOP LETTERING.
T-7	WHITE PAINTED TRAFFIC ARROW.
T-8	4" WHITE PAVEMENT MARKING.
T-11	STANDARD POLE MOUNTED SIGN INSTALLATION.
T-13	ADA ACCESSIBLE PARKING SPACE STRIPING.
T-14	RESERVED PARKING SPACE WITH PENALTIES & VAN ACCESSIBLE SIGNS.
T-15	RESERVED PARKING SPACE & PENALTIES SIGNS.
T-18	RESERVED PARKING SIGN WITHIN BOLLARD.
T-24	STANDARD CROSSWALK.



SITE LOCATION MAP

SCALE: 1" = 500'
SOURCE: GOOGLE MAPS

ZONING TABLE

ZONE: B-PUD - BUSINESS - PLANNED UNIT DEVELOPMENT
USE: CAR WASH
BLOCK: A0300-172-000-002 LOT: 9617

APPLICANT/ OWNER INFORMATION

APPLICANT:	NEW POTATO CREEK HOLDING, LLC C/O P.I.LAND DEVELOPMENT, LLC 71 CAROLYN BOULEVARD FARMINGDALE, NY 11735
PROPERTY OWNER:	JSR LAND COMPANY LLC 8814 MONTGOMERY ROAD CINCINNATI, OHIO 45236

BULK REQUIREMENTS

ITEM	CODE	REQUIRED	PROPOSED
MIN. LOT AREA	§ 617.2.A	130,680 SF (3.0 AC)	50,190 SF (1.15 AC)
MIN. YARD SETBACKS			
SIDE YARD	§ 617.2.B	50 FT	3.6 FT
REAR YARD	§ 617.2.B	50 FT	N/A
MAX. PERMITTED HEIGHT	§ 617.2.F	3 STORIES, 40 FT	<40 FT
MAX. LOT COVERAGE	§ 617.2.C	80%	66.6% (33,415 SF)
MIN. SETBACK FROM RESIDENTIAL DISTRICT	§ 617.2.B	50 FT	N/A
MIN. STRUCTURE SETBACK FROM PUBLIC RIGHT-OF-WAY	§ 617.2.B	20 FT	20 FT
MIN. ACCESSORY STRUCTURE SETBACK	§ 711.4	5 FT	3.6 FT
		KEY =	VARIANCE REQUIRED

PARKING REQUIREMENTS

ITEM	CODE	REQUIRED	PROPOSED
MIN. STALL DIMENSIONS	§ 801.1	162 SF, 9 FT X 18 FT	162 SF, 9 FT X 18 FT; 247 SF, 13 FT X 19 FT; 285 SF, 15 FT X 19 FT
MIN. PARKING STALLS	§ 812.5	5	27 (INCL. 2 ADA & 20 VACUUM STALL)
MIN. PARKING SETBACK	§ 801.2.D	5 FT (FROM R.O.W.)	44.1 FT
MIN. STACKING SPACES PER ENTRANCE	§ 804.3	6	20
MIN. ACCESS DRIVE WIDTH	§ 801.2	9 FT	13 FT
MAX. ACCESS DRIVE WIDTH	§ 801.2	24 FT	30 FT
FORMULA FOR CALCULATING REQUIRED STALLS: 1 PER EMPLOYEE = 1 * 5 EMPLOYEES = 5 STALLS REQUIRED			
		KEY =	VARIANCE REQUIRED

LEGEND

PROPOSED

PROPERTY LINE	
R.O.W. LINE	
EASEMENT LINE	
SETBACK LINE	
BUILDING	
CONCRETE CURB	
FLUSH CURB	
ACCESSIBLE SYMBOL	
CROSSWALK	
SIDEWALK	
SIGN	
BOLLARD	
PARKING COUNT	10
AREA LIGHT	
DRAINAGE INLET	
MANHOLE	
CLEANOUT	CO

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
INDUSTRIAL DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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8	06/21/2023	PER COUNTY COMMENTS	CCP LRB

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DRAWN BY:	CCP
CHECKED BY:	KJB
DATE:	07/29/2022
CAD I.D.:	PAD220070.00-SPPD-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212
Phone: (724) 638-8500
www.BohlerEngineering.com

STATE OF OHIO — MICHAEL C. TARR — REGISTERED LANDSCAPE ARCHITECT — 2010558

SHEET TITLE:

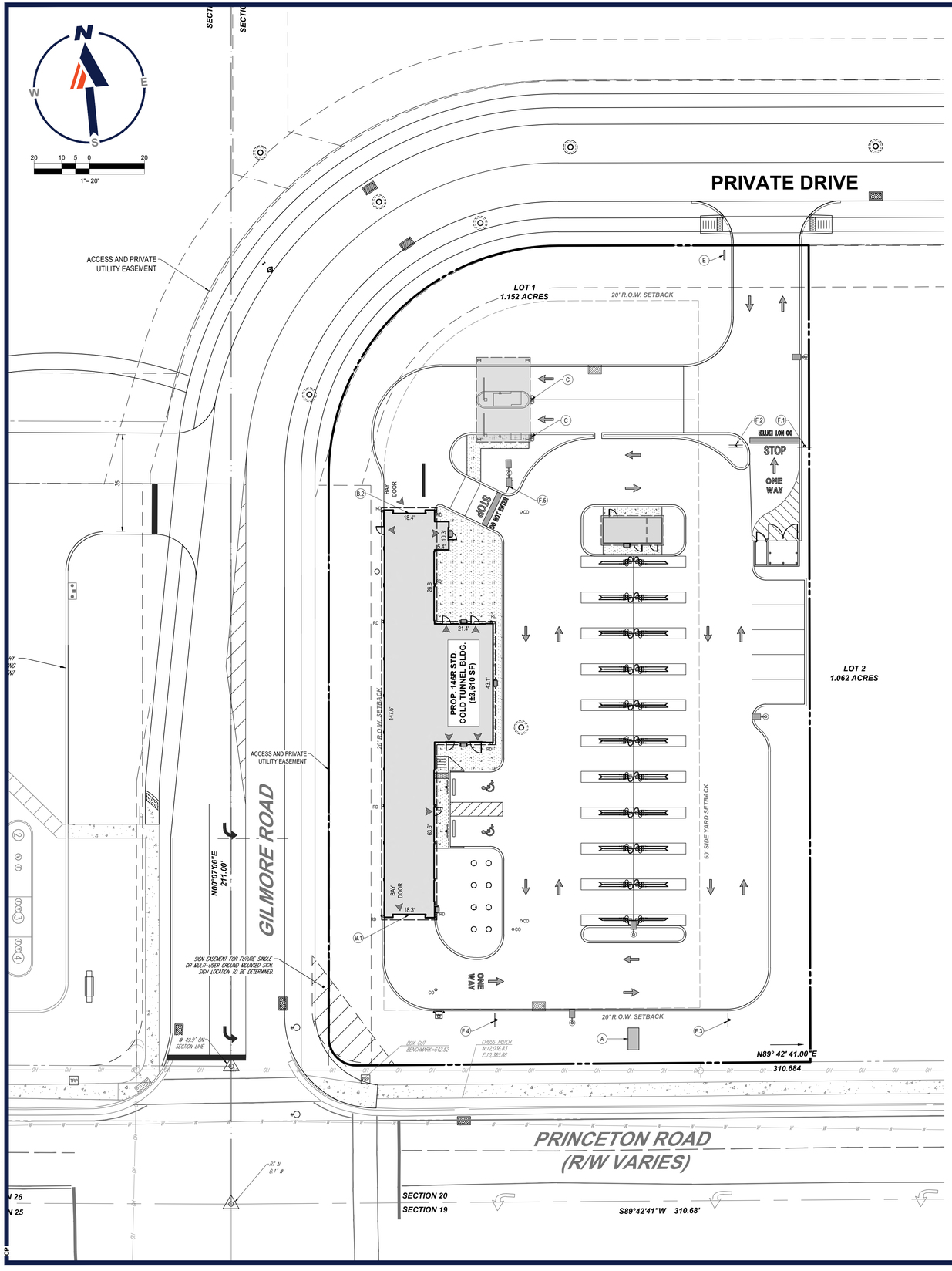
SITE PLAN

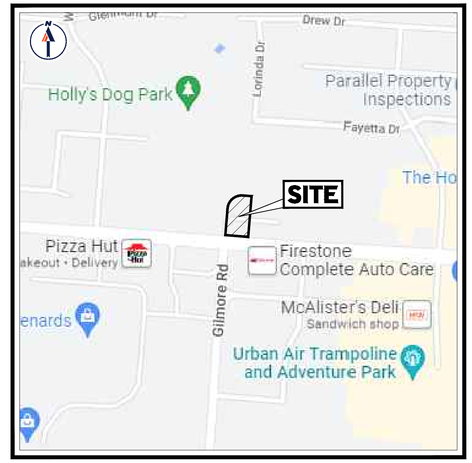
SHEET NUMBER:

C-301

REVISION 8 - 06/21/2023

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SITE LOCATION MAP

SCALE: 1" = 500'
SOURCE: GOOGLE MAPS

LEGEND

PROPOSED SIGNAGE	
A	MONUMENT SIGN
B	CHANNEL LETTER SIGN
C	CAR WASH MENUS
D	DUMPSTER PANEL GRAPHICS
E	ENTER SIGN
F	DIRECTIONAL SIGNS

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
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PLANNED UNIT DEVELOPMENT PLANS

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TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
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STATE OF OHIO
MICHAEL L. KAGAS
REGISTERED LANDSCAPE ARCHITECT
REVIEWED BY: LA 2101558
PENNSYLVANIA CERTIFICATE #LA000394
OHIO CERTIFICATE #2101558
INDIANA CERTIFICATE #LA20100008

SHEET TITLE:

SIGNAGE PLAN

SHEET NUMBER:

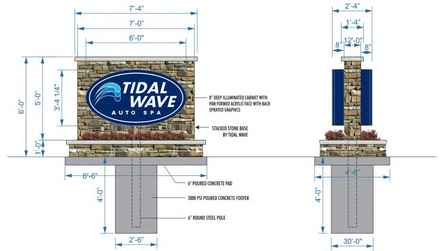
C-302

REVISION 8 - 06/21/2023

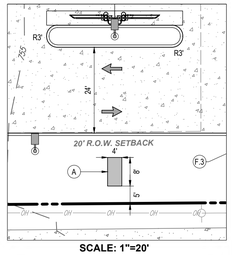
R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-SPPD-8B——LAYOUT: C-302 SIGN

SIGN TYPE A: MONUMENT SIGN
DOUBLE-SIDED, INTERNALLY ILLUMINATED
QTY: 1 - **20.3 SQ. FT.**

A



A



SCALE: 1"=20'

- P1 Paint - Match Pantone 281c
- P2 Paint - Sw 7757 "high Reflective White"
- P3 Digitally Printed Translucent Vinyl
  - Match Pantone 281c
  - Match Pantone 2985c
  - Match Pantone Process Blue
  - Match Pantone 368c

DOUBLE FACED CABINET — SEE LOCATION

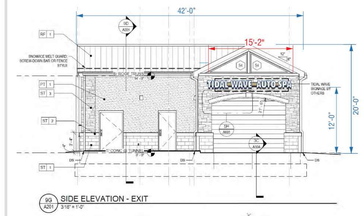
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SIGN TYPE B: FACE_LIT CHANNEL LETTERS
QTY: 1 SET FOR TUNNEL EXIT 19.01 SQ. FT.

B.1



FRONT VIEW
Scale: 3/4"=1'



SIDE ELEVATION - EXIT
3/16" = 1'-0"

SECTION VIEW
NOT TO SCALE

- P1 Paint - Match Pantone 281 C (Gloss Finish)
- P2 Paint - Match Sw 7102 Quinea Gray

DOUBLE FACED CABINET — SEE LOCATION

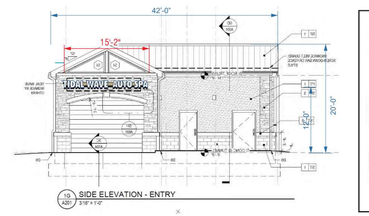
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SIGN TYPE B: FACE_LIT CHANNEL LETTERS
QTY: 1 SET FOR TUNNEL ENTRANCE

B.2



FRONT VIEW
Scale: 3/4"=1'



SIDE ELEVATION - ENTRY
3/16" = 1'-0"

SECTION VIEW
NOT TO SCALE

- P1 Paint - Match Pantone 281 C (Gloss Finish)
- P2 Paint - Match Sw 7102 Quinea Gray

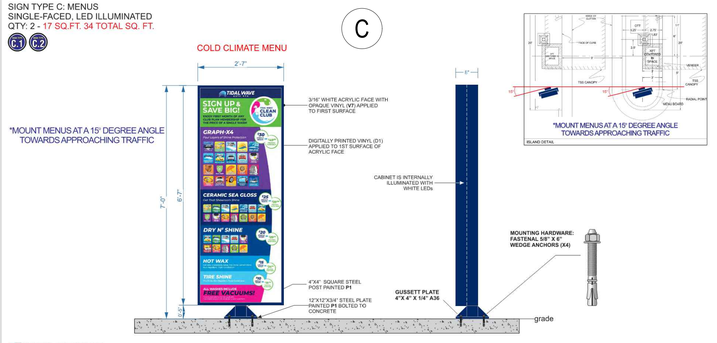
DOUBLE FACED CABINET — SEE LOCATION

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SIGN TYPE C: MENUS
SINGLE-FACED, LED ILLUMINATED
QTY: 2 - 17 SQ.FT. 34 TOTAL SQ. FT.

C.1 C.2

C



ISLAND DETAIL

FRONT ELEVATION
Scale: 3/4" =1'

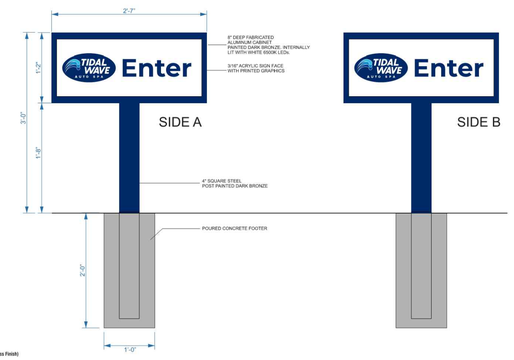
SIDE PROFILE
Scale: 3/4" =1'

- P1 OPAQUE VINYL - MATCH PANTONE 281 C
- P1 PAINT - MATCH PANTONE 281C
- P3 DIGITALLY PRINTED TRANSLUCENT VINYL
  - MATCH PANTONE 281C
  - MATCH PANTONE 2985C
  - MATCH PANTONE PROCESS BLUE
  - MATCH PANTONE 368C

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SIGN TYPE E: DOUBLE FACED - INTERNALLY ILLUMINATED ENTRANCE SIGN
QTY: 1 - 3 SQ. FT. EACH

E



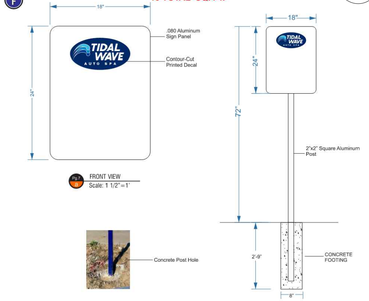
- P1 Paint - Match Pantone 281 C (Gloss Finish)

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SIGN TYPE F: DIRECTIONAL POST & PANEL SIGNS
QTY: 5

3 SQ. FT. EACH
15 TOTAL SQ. FT.

F



- P1 Paint - Match Pantone 281 C (Gloss Finish)

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SIGN TYPE F: DIRECTIONAL POST & PANEL SIGNS
MESSAGE SCHEDULE

F.1 F.2 QTY 2 D/F



DOUBLE FACED SIDE A



DOUBLE FACED SIDE B

F.3



SINGLE FACED

F.5



SINGLE FACED

F.4



SINGLE FACED

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
INDUSTRIAL DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	08/05/2022	PER CLIENT COMMENTS	CCP / KJB
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5	04/07/2023	PER TOWNSHIP COMMENTS	CCP / LRB
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7	05/30/2023	PER CLIENT COMMENTS	CCP / LRB
8	06/21/2023	PER COUNTY COMMENTS	CCP / LRB

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PROJECT No.: PAD220070.00
DRAWN BY: CCP
CHECKED BY: KJB
DATE: 07/29/2022
CAD I.D.: PAD220070.00-SPPD-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212
Phone: (724) 638-8500
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STATE OF OHIO
MICHAEL T. KAYS
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REVISED PLA.2101558
PROFESSIONAL ENGINEER REGISTERED
CIVIL ENGINEER
MICHAEL T. KAYS
PE-2001019394

SHEET TITLE:

SIGNAGE DETAILS

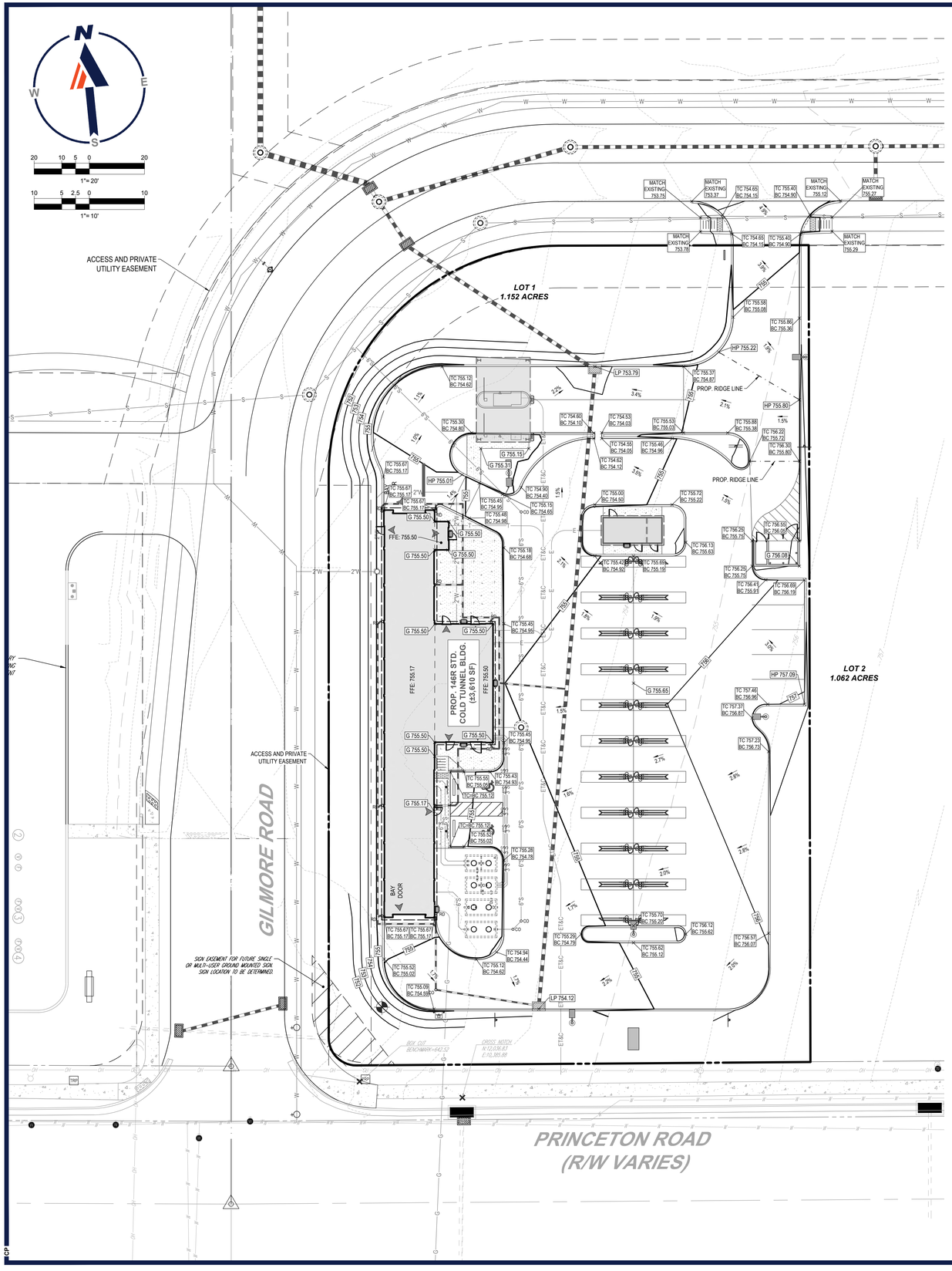
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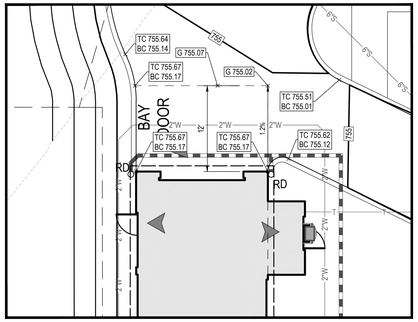
C-303

REVISION 8 - 06/21/2023

R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-SPPD-8B—LAYOUT: C-303 SIGN

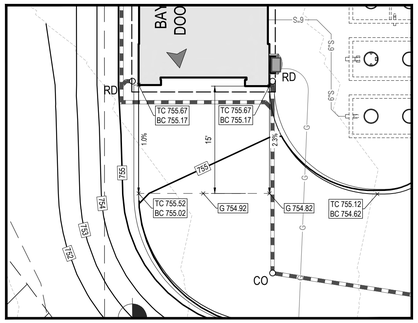
CCP





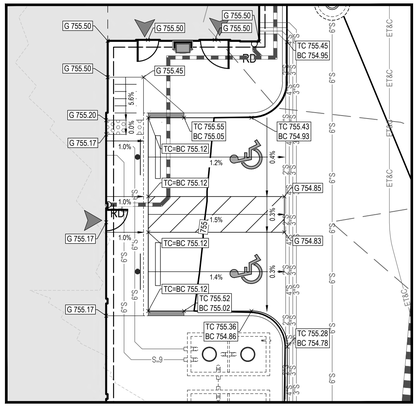
TUNNEL ENTRANCE ENLARGEMENT AREA

SCALE: 1"=10'



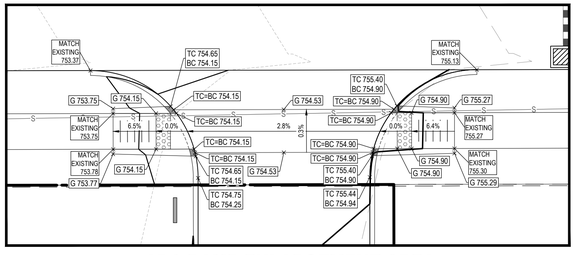
TUNNEL EXIT ENLARGEMENT AREA

SCALE: 1"=10'



ADA PARKING ENLARGEMENT AREA

SCALE: 1"=10'



ADA RAMP ENLARGEMENT AREA

SCALE: 1"=10'

GRADING NOTES

(Rev. 2/2021)

GENERAL

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. THE CONTRACTOR MUST FOLLOW THE REQUIREMENTS OF ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS, WHICH HAVE JURISDICTION OVER THIS PROJECT.
3. THE CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE ENGINEER OF RECORD AND THE OWNER PRIOR TO THE CONTRACTOR COMMENCING ANY WORK.
4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. SHOULD DISCREPANCIES BETWEEN THE PLANS AND INFORMATION OBTAINED THROUGH FIELD VERIFICATIONS BE IDENTIFIED OR EXIST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING.
5. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR MUST COMPACT ALL EXCAVATED OR FILLED AREAS IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT'S GUIDANCE. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED. THIS REPORT MUST VERIFY THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES WHICH ARE IN EFFECT AND WHICH ARE APPLICABLE TO THE PROJECT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE MUST BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL, COMPACTED AS THE GEOTECHNICAL REPORT DIRECTS. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.
6. IN THE EVENT OF A DISCREPANCY(IES) AND/OR A CONFLICT(S) BETWEEN PLANS, OR RELATIVE TO OTHER PLANS, THE GRADING PLAN TAKES PRECEDENCE AND CONTROLS. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY DISCREPANCY(IES) AND/OR CONFLICT(S).
7. THE CONTRACTOR IS RESPONSIBLE TO IMPORT FILL OR EXPORT EXCESS MATERIAL AS NECESSARY TO CONFORM TO THE PROPOSED GRADING, AND TO BACKFILL EXCAVATIONS FOR THE INSTALLATION OF UNDERGROUND IMPROVEMENTS.

SITE SPECIFIC

8. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE PAVEMENT GRADE UNLESS OTHERWISE NOTED.
9. THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE IS PROVIDED IN BOTH PAVED AND LAWN AREAS AFTER CONSTRUCTION. THE MINIMUM SLOPES FOR IMPROVEMENTS ARE 1% ON ALL CONCRETE SURFACES, 1.5% MINIMUM IN ASPHALT (EXCEPT WHERE ADA LIMITS SLOPE), AND 2% IN LAWN AREAS. ANY LOCALIZED DEPRESSIONS MUST BE ELIMINATED.
10. THE CONTRACTOR MUST ENSURE POSITIVE DRAINAGE AWAY FROM STRUCTURES. WHERE THE GRADING ALONG AND ADJACENT TO A BUILDING ARE SCHEMATIC DUE TO A GENERIC BUILDING FOOTPRINT, THE GRADES MUST BE ADJUSTED BASED ON FINAL ARCHITECTURAL PLANS TO PROVIDE THE MINIMUM REVEAL AS REQUIRED BY THE ARCHITECT AND TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING. ALL GRADING AND MINIMUM SLOPES AND SEPARATIONS MUST COMPLY WITH THE LATEST LOCAL AND STATE BUILDING CODES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES, AND CODES.
11. WHERE SUBGRADE BUILDING AREAS ARE PROVIDED, THE CONTRACTOR MUST DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED SUBGRADE BUILDING AREA. WHERE GROUNDWATER IS ENCOUNTERED AT THE ELEVATION OF THE SUBGRADE BUILDING AREA, APPROPRIATE CONSTRUCTION METHODS SHALL BE EMPLOYED TO PREVENT GROUNDWATER FROM ENTERING THE STRUCTURE(S). IF AND WHERE SUMP PUMPS ARE PROVIDED, ALL DISCHARGES MUST BE CONNECTED TO THE STORM SEWER OR OTHERWISE PROTECTED FROM CAUSING SURFACE RUNOFF EROSION.
12. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A GEOTECHNICAL ENGINEER AND IMPLEMENT RECOMMENDED STABILIZATION MEASURES FOR ANY CUT SLOPES IN EXCESS OF 2:1 AND/OR FILL SLOPES IN EXCESS OF 3:1.
13. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS OR GEOTECHNICAL SPECIFICATIONS.
14. ALL DISTURBED TOPSOIL ON THE SITE IS TO BE REDISTRIBUTED ON SITE IN AREAS NOT COVERED BY IMPERVIOUS SURFACES. REMOVAL OF TOPSOIL IS NOT ALLOWED, UNLESS OTHERWISE SPECIFIED BY THE SITE GEOTECHNICAL ENGINEER DUE TO THE SOIL'S UNSUITABILITY FOR PLACEMENT.

LEGEND

PROPOSED	
PROPERTY LINE	
R.O.W. LINE	
EASEMENT LINE	
SETBACK LINE	
BUILDING	
CONCRETE CURB	
FLUSH CURB	
ACCESSIBLE SYMBOL	
CROSSWALK	
SIDEWALK	
SIGN	
BOLLARD	
AREA LIGHT	
DRAINAGE INLET	
MANHOLE	
CLEANOUT	
ELECTRIC LINE	E
TELEPHONE LINE	T
ELECTRIC & TELEPHONE LINE	E&T
GAS LINE	G
WATER LINE	W
SANITARY SEWER	S
STORM PIPE	
SPOT ELEVATION	123.00 / TC 123.50 BC 123.00

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
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PERMITTING SERVICES
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PROJECT No.: PAD220070.00
DRAWN BY: CCP
CHECKED BY: KJB
DATE: 07/29/2022
CAD I.D.: PAD220070.00-SPPD-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

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SHEET TITLE:

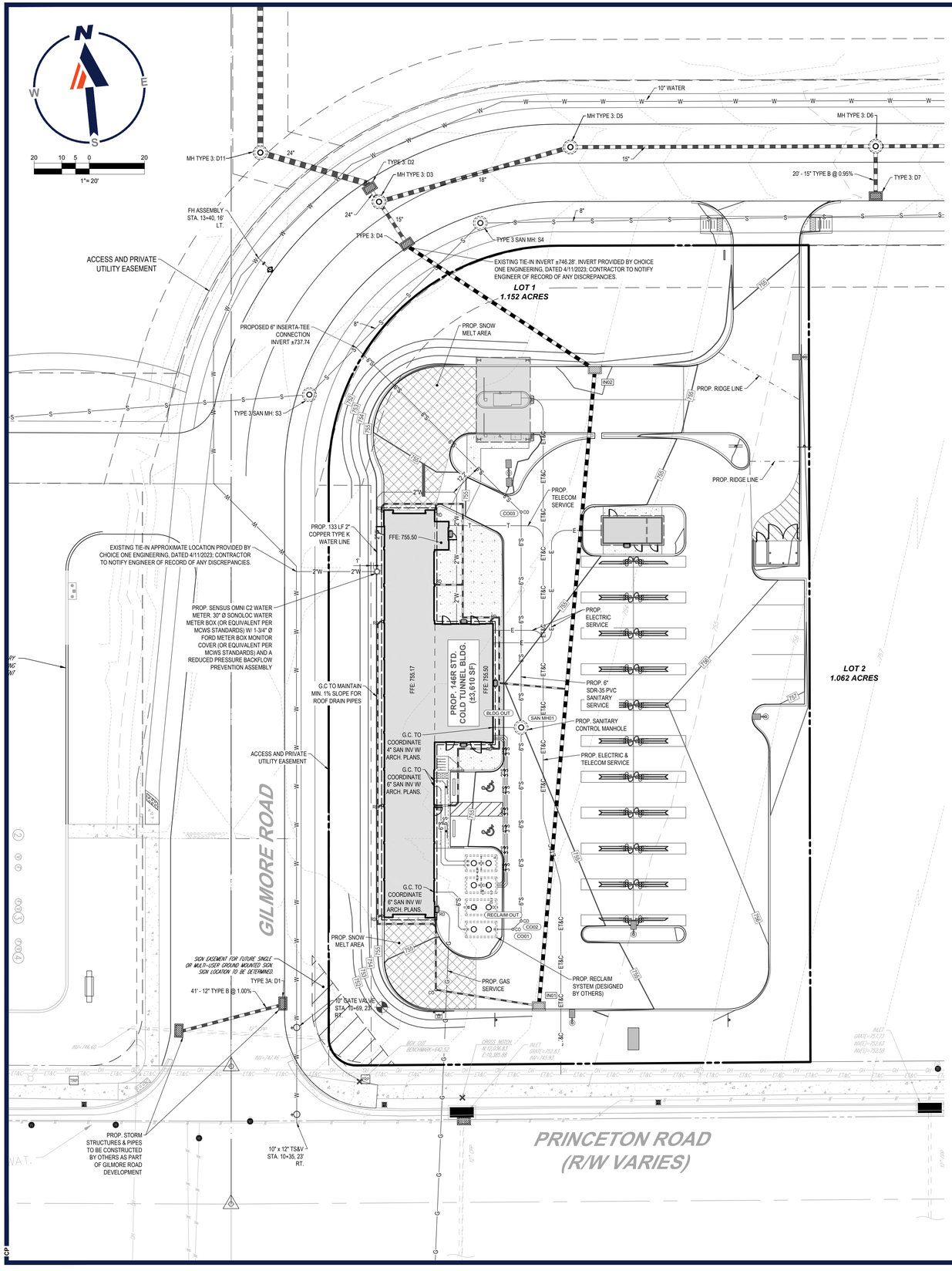
GRADING / UTILITY PLAN

SHEET NUMBER:

C-401

REVISION 8 - 06/21/2023

R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-SPPD-8B.dwg, 7/29/2022 8:39:55 AM, CCP



LEGEND

PROPOSED	
PROPERTY LINE	
EASEMENT LINE	
SETBACK LINE	
BUILDING	
CONCRETE CURB	
FLUSH CURB	
ACCESSIBLE SYMBOL	
CROSSWALK	
SIDEWALK	
SIGN	
BOLLARD	
AREA LIGHT	
DRAINAGE INLET	
MANHOLE	
CLEANOUT	CO
ELECTRIC LINE	E
TELEPHONE LINE	T
ELECTRIC & TELEPHONE LINE	E&T
GAS LINE	G
WATER LINE	W
SANITARY SEWER	S
STORM PIPE	

DRAINAGE AND UTILITY NOTES

(Rev. 2/2021)

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2. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE, AND THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM THOSE LOCATIONS AND SERVICES WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM ALL SANITARY CONNECTION POINTS AND ALL OTHER UTILITY SERVICE CONNECTION POINTS IN THE FIELD, PRIOR TO COMMENCING ANY CONSTRUCTION. THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, ERRORS AND OMISSIONS IN WRITING, TO THE ENGINEER OF RECORD.
3. THE CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC, WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES WHICH OCCURS DURING CONSTRUCTION.
4. THE CONTRACTOR MUST FIELD-VERIFY THE PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO CONFIRM EXACT DEPTH, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF SAME BASED UPON FINAL ARCHITECTURAL PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS; GREASE TRAP REQUIREMENTS; AND DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITY SERVICES WITH THE INDIVIDUAL COMPANIES TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS OF THE APPLICABLE JURISDICTION AND REGULATORY AGENCIES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE DOCUMENTS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, AND PRIOR TO CONSTRUCTION, MUST RESOLVE SAME.
7. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE EXACTLY AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND THE CONTRACTOR MUST COORDINATE SAME WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST COMPLY WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. ENGINEER OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR DESIGN OF TRENCH BACKFILL OR FOR COMPACTION REQUIREMENTS.
8. DURING THE INSTALLATION OF SANITARY, STORM, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE, IN ANY RESPECT, FROM THE INFORMATION CONTAINED IN THESE PLANS. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE APPROPRIATE PLAN(S), WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER IMMEDIATELY UPON THE COMPLETION OF WORK.
9. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SANITARY, WATER AND STORM SYSTEMS, ARE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND OR STATE DOT DETAILS AS APPLICABLE. THE CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.
10. FINAL LOCATIONS OF PROPOSED UTILITY POLES, AND OR POLES TO BE RELOCATED ARE AT THE SOLE DISCRETION OF THE RESPECTIVE UTILITY COMPANY, REGARDLESS OF WHAT THIS PLAN DEPICTS.
11. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. THE CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VAULT, PRIOR TO COMMENCING CONSTRUCTION.
12. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED FINISHED GRADES WITH NO TRIPPING OR SAFETY HAZARD IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

SITE-SPECIFIC

13. THESE PLANS INVOLVE BUILDINGS THAT MAY BE BUILT AT A LATER DATE. THE CONTRACTOR MUST EXTEND ALL LINES, INCLUDING, BUT NOT LIMITED TO STORM, SANITARY, TELECOM, GAS, AND ELECTRIC, AND IRRIGATION LINES TO A POINT AT LEAST FIVE FEET (5') BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. CONTRACTOR MUST CAP ENDS AS APPROPRIATE, MARK LOCATIONS WITH A STAKE, AND MUST NOTE THE LOCATION OF ALL OF THE ABOVE ON A CLEAN COPY OF A PLAN, WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER UPON COMPLETION OF WORK.
14. STORM AND SANITARY PIPE LENGTHS INDICATED IN THE PLANS ARE NOMINAL AND ARE MEASURED FROM THE CENTERS OF INLETS AND MANHOLES.
15. UNLESS OTHERWISE NOTED, ALL NEW UTILITIES/SERVICES, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, TELECOM, GAS, ETC. MUST BE INSTALLED UNDERGROUND. ALL NEW UTILITY SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY SERVICE PROVIDERS' INSTALLATION SPECIFICATIONS AND STANDARDS.
16. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS, MUST BE REPAIRED IN ACCORDANCE WITH THE REFERENCED MUNICIPAL, COUNTY, AND/OR DOT DETAILS AS APPLICABLE. CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY(IES) HAVING JURISDICTION.
17. VARIOUS ASPECTS OF THE UTILITY DESIGNS DEPICTED ON THE PLANS ARE SCHEMATIC IN ORDER TO PROVIDE PLAN CLARITY OR TO CONVEY A DESIGN INTENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY CONFIGURE ALL STRUCTURES IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL, SERVICE PROVIDER, OR MANUFACTURER REQUIREMENTS IN ORDER TO ACHIEVE PROPER SITING, OPERATION, CONNECTIONS, SEPARATIONS, AND ACCESSES. THE CONTRACTOR SHALL REVIEW THE PLAN SPECIFICATIONS AND PREPARE STRUCTURE DESIGNS THAT INCORPORATE ANY AND ALL INTEGRAL COMPONENTS, SUCH AS TRASH RACKS, GATES, VALVES, INTERNAL OR EXTERNAL LININGS, WATER QUALITY DEVICES, SUMPS, RESTRAINTS, STEPS, FRAMES AND GRATES, PIPE/CONDUIT CONNECTIONS, MATERIALS, ETC. SHOULD DISCREPANCIES OR CONFLICTS ARISE UPON THE DESIGN OF THESE STRUCTURES OR INCORPORATION OF THE VARIOUS ELEMENTS, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD OR BOHLER IN WRITING.
18. UTILITIES IN GILMORE ROAD ARE TO BE CONSTRUCTED AND OPERATED BY OTHERS.

STORM STRUCTURE SCHEDULE

NAME	TYPE	GRT/RIM ELEV. (FT.)	INVERTS
EX D4	EXISTING INLET	750.62'	INV IN = 746.28' (15" HDPE) INV OUT = 746.18' (15" HDPE)
EX MH D3	EXISTING MANHOLE	750.39'	INV IN = 745.86' (15" HDPE)
IN01	REINFORCED CONCRETE	754.29'	INV OUT = 749.28' (15" HDPE)
IN02	REINFORCED CONCRETE	753.82'	INV IN = 746.97' (15" HDPE) INV OUT = 746.77' (15" HDPE)

STORM SEWER PIPE SCHEDULE

FROM	TO	SIZE (IN.)	TYPE	LENGTH (FT.)	SLOPE(%)
EX D4	EX MH D3	15"	HDPE	20	1.61%
IN01	IN02	15"	HDPE	231	1.00%
IN02	EX D4	15"	HDPE	81	0.60%

SANITARY STRUCTURE SCHEDULE

NAME	TYPE	RIM ELEV. (FT.)	INVERTS
BLDG OUT	BUILDING INVERT		INV OUT = 748.30'
CO01	6 INCH CYLINDRICAL STRUCTURE	754.56	INV IN = 749.07' INV OUT = 749.07'
CO02	6 INCH CYLINDRICAL STRUCTURE	754.62	INV IN = 748.99' INV OUT = 748.99'
CO03	6 INCH CYLINDRICAL STRUCTURE	754.60	INV IN = 742.80' INV OUT = 742.80'
RECLAIM OUT	RECLAIM SYSTEM INVERT		INV OUT = 749.17'
SAN MH01	TYPE 4	755.00	INV IN = 747.69' INV IN = 747.69' INV OUT = 747.49'

SANITARY PIPE SCHEDULE

FROM	TO	SIZE IN.	TYPE	n MANNING'S COEF.	So SLOPE %	L LENGTH FT.
BLDG OUT	SAN MH01	4	PVC	0.000	6.00%	10.19
CO01	CO02	6	PVC	0.000	1.85%	4.21
CO02	SAN MH01	6	PVC	0.000	1.85%	70.15
CO03	TIE-IN	6	PVC	0.000	6.00%	84.39
RECLAIM OUT	CO01	6	PVC	0.000	1.85%	5.52
SAN MH01	CO03	6	PVC	0.000	6.00%	78.12

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REVISIONS

REV	DATE	COMMENT	DRAWN BY CHECKED BY
1	08/05/2022	PER CLIENT COMMENTS	CCP KJB
2	08/25/2022	PER CLIENT COMMENTS	CCP KJB
3	11/30/2022	PER ARCH REVISIONS	CCP KJB
4	02/07/2023	PER ARCH REVISIONS	CCP KJB
5	04/07/2023	PER TOWNSHIP COMMENTS	CCP LRB
6	05/22/2023	PER CLIENT COMMENTS	CCP LRB
7	05/30/2023	PER CLIENT COMMENTS	CCP LRB
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PROJECT No.: PAD220070.00
DRAWN BY: CCP
CHECKED BY: KJB
DATE: 07/29/2022
CAD I.D.: PAD220070.00-SPPD-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212
Phone: (724) 638-8500
www.BohlerEngineering.com

STATE OF OHIO
MICHAEL J. TAMMARO
2101558
REGISTERED LANDSCAPE ARCHITECT
RELEASED FOR CONSTRUCTION
PROJECT

SHEET TITLE:

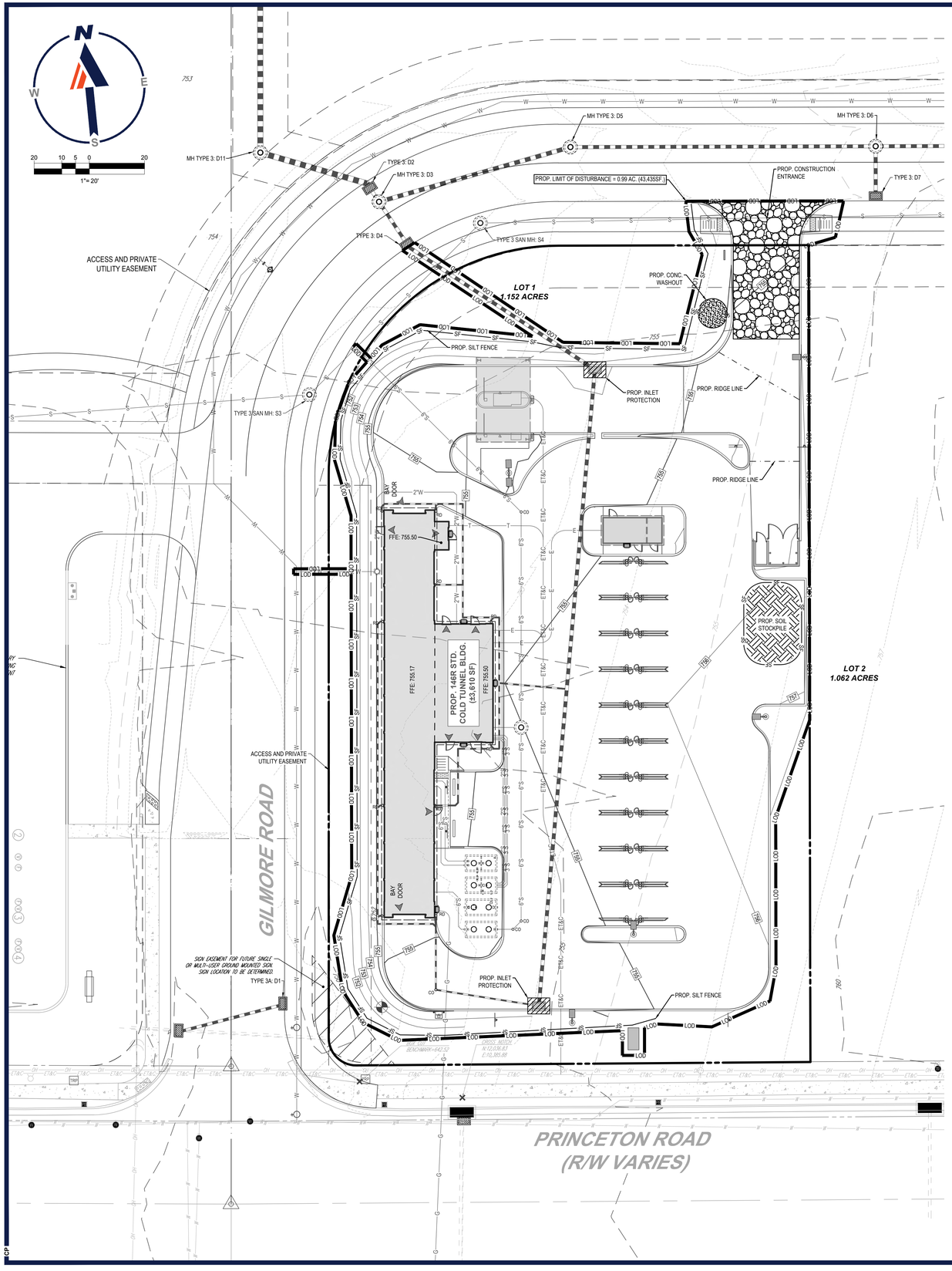
UTILITY PLAN

SHEET NUMBER:

C-501

REVISION 8 - 06/21/2023

R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-SPPD-8B.....\LAYOUT C-501 UTILITY CCP



LEGEND

PROPOSED

LIMIT OF DISTURBANCE	LOD
SILT FENCE	SF
CONCRETE WASHOUT	
TEMPORARY STOCKPILE	SP
ROCK CONSTRUCTION ENTRANCE	

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STATE OF OHIO
MICHAEL J. KAWA
REGISTERED LANDSCAPE ARCHITECT
REGISTERED LA 2101558
PROFESSIONAL ENGINEER
REGISTERED PE 84794
OHIO LICENSED SURVEYOR
REGISTERED PS 8369

SHEET TITLE:

SOIL EROSION & SEDIMENT POLLUTION CONTROL PLAN

SHEET NUMBER:

C-601

REVISION 8 - 06/21/2023

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USGS MAP

SCALE: 1" = 1,000'
SOURCE: USGS HAMILTON QUADRANGLE



SOIL MAP

SCALE: 1" = 80'
SOURCE: WEB SOIL SURVEY

SOIL TYPES, LIMITATIONS & RESOLUTIONS

1. SHOULD GROUND WATER BE ENCOUNTERED DURING FOUNDATION OR UTILITY EXCAVATIONS, WATER SHALL BE PUMPED FROM TRENCH INTO FILTER BAG. DEWATERING SHALL NOT CREATE TURBID OR SEDIMENT LADEN DISCHARGE.

2. DUE TO GRADING LIMITATIONS OF SOILS DURING WINTER MONTHS, THE CONTRACTOR SHALL NOT GRADE THESE SOILS DURING FROSTING OR ICING CONDITIONS.

3. SHOULD BEDROCK BE ENCOUNTERED DURING FOUNDATION OR UTILITY EXCAVATION, ROCK SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER.

4. SOIL TESTING SHOULD BE PERFORMED TO DETERMINE SOIL SUITABILITY FOR TOP SOIL. IF SOIL IS DETERMINED TO BE UNSUITABLE THEN TOPSOIL SHALL BE IMPORTED AND DISTURBED THROUGHOUT THE SITE AS REQUIRED.

SITE SOIL DATA		
MAP UNIT SYMBOL OF SOIL	MAP UNIT NAME OF SOIL	HYDROLOGIC RATING
DaB	DANA SILT LOAM, 2 TO 6 PERCENT SLOPES	C
WyB2	WYNN SILT LOAM, 2 TO 6 PERCENT SLOPES	C

MAINTENANCE PROGRAM

THE FOLLOWING MAINTENANCE PROGRAM HAS BEEN DEVELOPED TO PROVIDE FOR THE INSPECTION OF BMPs TO ENSURE THEIR EFFECTIVE AND EFFICIENT OPERATION. SITE INSPECTIONS TO BE PERFORMED ONCE EVERY 7 CALENDAR DAYS; AND AFTER EVERY RAIN EVENT > 0.5-INCH IN A 24-HOUR PERIOD BY THE END OF NEXT CALENDAR DAY (EXCLUDING NON-WORKING WEEKENDS & HOLIDAYS). THE INSPECTION FREQUENCY MAY BE REDUCED TO MONTHLY FOR DORMANT SITES IF: 1. THE ENTIRE SITE IS TEMPORARILY STABILIZED 2. RUNOFF IS UNLIKELY DUE TO WEATHER CONDITIONS FOR EXTENDED PERIODS OF TIME. ONLY QUALIFIED INSPECTION PERSONNEL SHALL PERFORM SITE INSPECTIONS.

UNTIL THE SITE IS STABILIZED AND DURING CONSTRUCTION ACTIVITIES, ALL BMPs MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY AND IN ACCORDANCE WITH THESE PROCEDURES, PLANS AND DETAILS. ANY AREAS DISTURBED DURING MAINTENANCE MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS. ALL SITE INSPECTIONS MUST BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INDICATING THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG MUST BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

- SILT FENCE - INSPECTIONS SHALL BE CONDUCTED ON A WEEKLY BASIS AND/OR AFTER EACH RUNOFF EVENT. NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE HEIGHT OF THE FENCE. THE SEDIMENT SHALL BE DISPOSED OF ON SITE AND/OR IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. DAMAGED SILT FENCE SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION. FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

- CATCH BASIN PROTECTION (FILTER BAGS) - INSPECTIONS SHALL BE CONDUCTED ON A WEEKLY BASIS AND/OR AFTER EACH RUNOFF EVENT. NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION. FILTER BAGS SHOULD BE CLEANED AND/OR REPLACED AFTER EACH RUNOFF EVENT. THE SEDIMENT SHALL BE DISPOSED OF ON SITE AND/OR IN ACCORDANCE WITH APPLICABLE STATE REGULATIONS. DAMAGED FILTER BAGS SHOULD BE REPLACED.

- CONSTRUCTION ENTRANCES - LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. A STABILIZED CONSTRUCTION EXIT SHALL BE CONSTRUCTED WHERE VEHICLES ENTER AND EXIT. EXITS SHALL BE MAINTAINED OR SUPPLEMENTED AS NECESSARY TO PREVENT THE RELEASE OF SEDIMENT FROM VEHICLES LEAVING THE SITE. ANY SEDIMENT DEPOSITED ON THE ROADWAY SHALL BE SWEPT AS NECESSARY THROUGHOUT THE DAY OR AT THE END OF EVERY DAY AND DISPOSED OF IN AN APPROPRIATE MANNER. SEDIMENT SHALL NOT BE WASHED INTO STORM SEWER SYSTEMS. SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED AS A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED OR SWEPT INTO ANY ROAD SIDE DITCH, STORM SEWER OR SURFACE WATER.

- INSPECTIONS SHALL EVALUATE DISTURBED AREAS AND AREAS USED FOR STORING MATERIALS THAT ARE EXPOSED TO RAINFALL FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM OR DISCHARGING FROM THE SITE. IF NECESSARY, THE MATERIALS MUST BE COVERED OR ORIGINAL COVERS MUST BE REPAIRED OR SUPPLEMENTED. ALL AREAS DISTURBED DURING THE EARTHWORK PHASE OF CONSTRUCTION MUST BE TEMPORARILY SEEDED AND STABILIZED WITH HYDRO-STRAW IF PERMANENT STABILIZATION CANNOT BE ACHIEVED WITHIN FOUR (4) DAYS. ALSO, PROTECTIVE BERMS MUST BE CONSTRUCTED, IF NEEDED, IN ORDER TO CONTAIN RUNOFF FROM MATERIAL STORAGE AREAS.

- GRASSED AREAS SHALL BE INSPECTED TO CONFIRM THAT A HEALTHY STAND OF GRASS IS MAINTAINED. THE SITE HAS ACHIEVED FINAL STABILIZATION ONCE ALL AREAS ARE COVERED WITH BUILDING FOUNDATION OR PAVEMENT, OR HAVE A STAND OF GRASS WITH AT LEAST 70 PERCENT DENSITY OR GREATER IN ACCORDANCE WITH PERMIT REQUIREMENTS. THE VEGETATIVE DENSITY MUST BE MAINTAINED TO BE CONSIDERED STABILIZED. AREAS MUST BE WATERED, FERTILIZED, AND RESEEDED AS NEEDED TO ACHIEVE THIS REQUIREMENT.

- ALL DISCHARGE POINTS MUST BE INSPECTED TO DETERMINE WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING DISCHARGE OF SEDIMENT FROM THE SITE OR IMPACTS TO RECEIVING WATERS.

- REPAIRS AND/OR CLEANING SHALL OCCUR WITHIN THREE (3) DAYS OF THE INSPECTION FOR NON-SEDIMENT POND BMPS AND WITHIN TEN (10) DAYS OF THE INSPECTION FOR SEDIMENT PONDS.

P.C.S.W.M. B.M.P. INSPECTION AND MAINTENANCE NOTES

1.) UNTIL THE SITE IS STABILIZED AND DURING THE CONSTRUCTION ACTIVITIES, ALL BMPS MUST BE MAINTAINED PROPERLY BY CONTRACTOR. ALL PERMANENT MAINTENANCE PROCEDURES SHALL BE PERFORMED BY THE OWNER. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY AND IN ACCORDANCE WITH THESE PROCEDURES, PLANS, AND DETAILS. ANY AREAS DISTURBED DURING MAINTENANCE MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH OHIO EPA PERMIT NO. OHC000006. ALL SITE INSPECTIONS MUST BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INDICATING THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG MUST BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

2.) ALL SEDIMENT/DEBRIS/OIL REMOVED FROM THE STORM WATER MANAGEMENT SYSTEM SHALL BE DISPOSED PER LOCAL, STATE, AND FEDERAL STANDARDS.

3.) SHOULD ON-SITE EROSION OCCUR FROM THE LANDSCAPED AREAS, SOURCE OF EROSION SHALL BE IMMEDIATELY STABILIZED AND THE CATCH BASINS, MANHOLES, AND STORM WATER PIPING SHALL BE CHECKED FOR ACCUMULATION AND CLEARED IF ACCUMULATION OF SEDIMENT EXISTS.

DEFINITION OF CLEAN FILL AND IMPORTIEXPORT MATERIAL NOTES

(A) CLEAN HARD FILL CONSISTING OF REINFORCED OR NONREINFORCED CONCRETE, ASPHALT CONCRETE, BRICK, BLOCK, TILE, OR STONE SHALL BE MANAGED IN ONE OR MORE OF THE FOLLOWING WAYS:

(1) RECYCLED INTO A USABLE CONSTRUCTION MATERIAL.

(2) DISPOSED IN LICENSED CONSTRUCTION AND DEMOLITION DEBRIS OR OTHER WASTE FACILITIES.

(3) USED IN LEGITIMATE FILL OPERATIONS FOR CONSTRUCTION PURPOSES OR TO BRING THE SITE UP TO A CONSISTENT GRADE, ON THE SITE OF GENERATION.

(4) USED IN LEGITIMATE FILL OPERATIONS FOR CONSTRUCTION PURPOSES OR TO BRING THE SITE UP TO A CONSISTENT GRADE, ON A SITE OTHER THAN THE SITE OF GENERATION, PURSUANT TO PARAGRAPH (C) OF THIS RULE.

[COMMENT: USE OF CLEAN HARD FILL MAY CREATE A NUISANCE OR A SAFETY HAZARD. THE APPLICATION OF COVER OVER THE CLEAN HARD FILL MAY BE ONE WAY TO ADDRESS THE NUISANCE OR SAFETY HAZARD.]

(B) CLEAN HARD FILL MAY BE STORED FOR A PERIOD OF LESS THAN TWO YEARS. FOR THE PURPOSE OF THIS RULE, "STORED" MEANS DEBRIS WHICH IS HELD IN A MANNER REMAINING RETRIEVABLE AND SUBSTANTIALLY UNCHANGED. CLEAN HARD FILL STORED MORE THAN TWO YEARS SHALL BE CONSIDERED ILLEGAL DISPOSAL OF CONSTRUCTION AND DEMOLITION DEBRIS. HOWEVER CLEAN HARD FILL PILED ADJACENT TO A CONSTRUCTION MATERIALS PROCESSING FACILITY SHALL NOT BE CONSIDERED STORED FOR MORE THAN TWO YEARS IF THE PILE IS ACTIVE, THAT IS, IF CLEAN HARD FILL MATERIAL IS ADDED TO AND REMOVED FROM THE PILE WITHIN A TWO YEAR PERIOD.

(C) THE PERSON RESPONSIBLE FOR CAUSING CLEAN HARD FILL TO BE USED IN LEGITIMATE FILL OPERATIONS FOR CONSTRUCTION PURPOSES OR TO BRING THE SITE UP TO A CONSISTENT GRADE, ON A SITE OTHER THAN THE SITE OF GENERATION, SHALL PROVIDE A WRITTEN "NOTICE OF INTENT TO FILL" TO EACH LICENSING AUTHORITY WHERE THE CLEAN HARD FILL IS TO BE PLACED. THE "NOTICE OF INTENT TO FILL" SHALL STATE THE NATURE OF THE FILL MATERIAL, THE SITE TO BE FILLED, WHEN FILLING WILL BEGIN AND END, AND THE TELEPHONE NUMBER OF THE NOTIFIER. THE NOTIFICATION SHALL BE RECEIVED BY EACH LOCAL LICENSING AUTHORITY WITH SITES TO BE FILLED, AT LEAST SEVEN DAYS PRIOR TO FILLING AS REQUIRED BY DIVISION (F) OF SECTION 3714.13 OF THE REVISED CODE. THE NOTIFIER SHALL PROVIDE A NEW NOTICE OF INTENT TO FILL IF THERE ARE ANY CHANGES IN THE INFORMATION REQUIRED BY THIS RULE FOR NOTIFICATION.

GENERAL CONSERVATION NOTES AND SPECIFICATIONS

I. GENERAL INFORMATION

A. THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE AVAILABLE AT THE SITE.
B. NO SEDIMENT OR SEDIMENT LADEN WATER MUST BE ALLOWED TO LEAVE THE SITE WITHOUT FIRST BEING PROPERLY FILTERED.
C. ANY SEDIMENT THAT IS TRACKED ONTO THE ROAD MUST BE CLEANED OFF BEFORE THE END OF THE DAY.
D. DISTURBED AREAS ON WHICH EARTHMOVING ACTIVITIES HAVE CEASED AND WHICH WILL REMAIN EXPOSED SHALL BE STABILIZED IMMEDIATELY, EITHER TEMPORARILY OR PERMANENTLY, INCLUDING THE RESTORATION OF DRIVEWAYS, STOCKPILES, OFF-SITE UNDERGROUND UTILITY LINES AND GRADED PERIMETER AREAS. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUBGRADES IS CONSIDERED ADEQUATE PROTECTION.
E. AREAS THAT FAIL TO GERMINATE MUST BE RE-SEEDED OR MULCHED.
F. WHERE DISTURBED AREAS ARE DIFFICULT TO STABILIZE, NETTING SHOULD BE USED TO HOLD SEED AND MULCH IN PLACE. THIS IS ESPECIALLY IMPORTANT AROUND WATERCOURSES, IN SWALES AND AREAS OF CONCENTRATED FLOWS, STEEP SLOPES.
G. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY. IF AT ANY TIME PRIOR TO SITE STABILIZATION ANY E&SP PROBLEMS OCCUR WHICH REQUIRE ADDITIONAL CONTROLS, IMMEDIATE ACTION MUST BE TAKEN TO CORRECT THE PROBLEMS.
H. THE CONTRACTOR MUST DEVELOP AND COORDINATE WITH OWNER AND HAVE APPROVED BY THE BUTLER COUNTY STORM WATER DISTRICT, A SEPARATE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR EACH SPOIL, BORROW OR OTHER WORK AREA NOT DETAILED ON THE PERMITTED PLANS, WHETHER LOCATED WITHIN OR OUTSIDE OF THE LIMITS OF CONSTRUCTION.
I. CONTRACTOR SHALL NOTIFY THE EPA OF DISPOSAL METHOD AND LOCATION OF MATERIALS (IF ANY) TO BE REMOVED FROM SITE.
J. ALL MATERIALS TO BE RECYCLED OR DISPOSED OF MUST DO SO IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS. STOCKPILES TO BE HAULED OFF SITE MUST HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN AT THE DESTINATION LOCATION.
K. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SOIL STABILIZATION THROUGHOUT CONSTRUCTION. ADDITIONAL MEASURES REQUIRED TO ENSURE ON-SITE AND OFF-SITE STABILIZATION IN AND ADJACENT TO CONSTRUCTION ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT NO COST TO THE OWNER. IMMEDIATE NOTIFICATION SHALL BE GIVEN TO THE OWNER AND ENGINEER SHOULD ADDITION STABILIZATION MEASURES BE NECESSARY; IN ACCORDANCE WITH THE NPDES AND/OR SWPPP REQUIREMENTS FOR THE PROJECT.

II. STANDARD FOR LAND GRADING

A. DEFINITION: RESHAPING THE GROUND SURFACE BY GRADING TO PLAN GRADES, WHICH ARE DETERMINED BY TOPOGRAPHIC SURVEY AND LAYOUT.
A.1. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FULL SLOPES.
A.2. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
B. INSTALLATION REQUIREMENTS
B.1. TIMBER, LOGS, BRUSH, RUBBISH, ROCKS, STUMPS AND VEGETABLE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OR FILL AREAS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH STANDARD FOR DISPOSAL OF MATERIALS.
B.2. FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.
B.3. ALL FILLS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESS SATURATION.
B.4. ALL DISTURBED AREAS SHALL BE LEFT WITH A NEAT AND FINISHED APPEARANCE AND SHALL BE PROTECTED FROM EROSION.
B.5. (SEE I. D.).

III. STANDARD FOR UTILITY TRENCH EXCAVATION

A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
B. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR A MAX. OF SIX DAYS FOR CERTAIN CASES REQUIRING TESTING OF THE INSTALLED PIPE.
C. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING TO A FACILITY FOR REMOVAL OF SEDIMENT (SEDIMENT FILTER BAG, SEE DETAIL) BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS.
D. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES / FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE IMMEDIATELY.
E. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FORM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
F. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

IV. STANDARD FOR TEMPORARY STABILIZATION

TEMPORARY STABILIZATION OF DISTURBED AREAS SHALL, AT A MINIMUM, BE INITIATED IN ACCORDANCE WITH THE TIME FRAMES SPECIFIED IN TABLE 2 OF OHIO EPA PERMIT NO. OHC000006.

A. STANDARD FOR TEMPORARY STABILIZATION WITH FIBERMULCH
A.1. MULCHING IS MOST APPLICABLE TO THOSE AREAS SUBJECT TO PERIODIC DISTURBANCE AND REWORKING IN ADDITION, STABILIZATION WITH FIBER MULCH SHALL BE USED DURING NON-GERMINATION PERIODS.
A.2. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE.
A.3. GRADE AS NEED AND FEASIBLE. SEE STANDARD FOR LAND GRADING.
A.4. PROTECTIVE MATERIALS TO BE USED:
A.4.a UNROTTED SMALL-GRAIN UN-CHOPPED STRAW OR HAY AT 3.0 TONS PER ACRE (4 TONS PER ACRE BETWEEN NOVEMBER 1 AND MARCH 1) SPREAD UNIFORMLY AND ANCHORED WITH LIQUID MULCH BINDER. BINDER PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S SPECIFICATIONS.
A.4.b HYDROMULCHER: USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL. LIQUID MULCH BINDERS: APPLY IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. PRODUCTS TO BE INSTALLED AT A RATE OF 1 TON PER ACRE (MINIMUM) OR PER MANUFACTURER'S SPECIFICATIONS.

B. STANDARD FOR TEMPORARY STABILIZATION WITH SEED
B.1. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN THREE (3) YEARS OR LESS MUST BE SEEDED AND MULCHED IMMEDIATELY WITH A TEMPORARY COVER.
B.2. ALL AREAS TO BE PERMANENTLY SEEDED SHALL ALSO RECEIVE TEMPORARY SEEDING CONCURRENTLY.
B.3. SEEDBED PREPARATION FOR TEMPORARY SEEDING
B.3.A PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO SLOPE.
B.3.B. APPLY AGRICULTURAL LIME AT A RATE OF 1 TONE PER ACRE
B.3.C. APPLY 10-10-10 FERTILIZER A RATE OF 500 POUNDS PER ACRE
B.3.D. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR (4) INCHES.

C. SEEDING: SEE SEEDING SPECIFICATIONS

V. STANDARD FOR PERMANENT STABILIZATION

PERMANENT STABILIZATION OF DISTURBED AREAS SHALL, AT A MINIMUM, BE INITIATED IN ACCORDANCE WITH THE TIME FRAMES SPECIFIED IN TABLE 1 OF OHIO EPA PERMIT NO. OHC000006.

A. SPECIFICATION FOR SEEDING & SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER
A.1. SITE PREPARATION
A.1.a. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.
A.1.b. SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT AND LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL PH TO BETWEEN 5.5 AND 7 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
A.1.c. IMMEDIATELY PRIOR TO TOPSOIL DISTRIBUTION, THE SURFACE SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3-5 INCHES TO PROVIDE A GOOD BOND WITH THE TOPSOIL.
A.2. APPLYING TOPSOIL
A.2.a TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.
A.2.b. ALL DISTURBED TOPSOIL ON-SITE IS TO BE REDISTRIBUTED ON-SITE IN AREAS NOT COVERED BY IMPERVIOUS SURFACES. NO REMOVAL OF TOPSOIL IS ALLOWED UNLESS APPROVED BY THE STATE OF OHIO. UNIFORM APPLICATION TO A DEPTH OF 6-8 INCHES (UNSETTLED) IS RECOMMENDED. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE.
A.3. SEEDBED PREPARATION
A.3.a A SOIL TEST SHALL BE CONDUCTED TO ACCURATELY DETERMINE NECESSARY SOIL AMENDMENTS.
A.3.b. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO SLOPE.
A.3.c. SOIL MODIFICATIONS:
A.3.c.1. APPLY 10-20-20 RATED FERTILIZER AT A RATE OF 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET, OR AS DIRECTED BY SOIL TEST.
A.3.c.2. APPLY AGRICULTURAL LIME AT A RATE OF 6 TONS PER ACRE OR 240 POUNDS PER 1000 SQUARE FEET, OR AS DIRECTED BY SOIL TEST.
A.3.d. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM FINE SEEDBED IS PREPARED.
A.3.e. REMOVE FROM THE SURFACE ALL STONES ONE INCH (1") OR LARGER IN ANY DIMENSION, REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.
A.3.f. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.
A.4. SEEDING: SEE SEEDING SPECIFICATIONS
A.5. SEED BED AREAS SHALL ALSO BE STABILIZED USING AN APPROVED METHOD (EG: HYDROMULCHING) AS OUTLINED IN ITEM IV.A. HEREIN.

B. STANDARD FOR PERMANENT STABILIZATION WITH SOD
B.1. METHODS AND MATERIALS
B.1.a CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD. SPECIFY "CERTIFIED SOD," OR OTHER HIGH QUALITY CULTIVATED SOD.
B.1.b. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.
B.1.c. SOD SHOULD BE OF UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT TIME OF CUTTING. (EXCLUDES TOP GROWTH).
B.1.d. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 0% OF THE STRIP. BROKEN PADS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
B.1.e. A SOD OF KENTUCKY 31 TALL FESCUE WITH BLUEGRASS, OR A FESCUE BLEND IS PREFERRED.
B.1.f. ONLY MOIST, FRESH UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
B.2. SITE PREPARATIONS: SEE SPECIFICATION FOR SEEDING & SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER (ITEM V.A. ABOVE)
B.3. SOD PLACEMENT
B.3.a. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
B.3.b. PLACE SOD STRIPS WITH SNUG EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.
B.3.c. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE DRYING OF THE ROOTS.
B.3.d. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES OR A BIODEGRADABLE FASTENER.
B.3.e. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.
B.3.f. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.
B.4. FOLLOW-UP INSPECTION: AFTER THE FIRST GROWING SEASON, THE SOD SHOULD BE INSPECTED TO DETERMINE IF ADDITIONAL FERTILIZATION OR LIMING IS NEEDED.

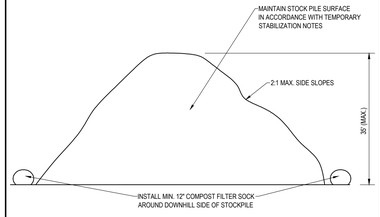
SEQUENCE OF BMP INSTALLATION AND REMOVAL

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH THE OHIO RAINWATER AND LAND DEVELOPMENT REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING, BUT NOT LIMITED TO: THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND A REPRESENTATIVE OF THE OHIO EPA FOR AN ON-SITE PRE-CONSTRUCTION MEETING. TO SCHEDULE A PRE-CONSTRUCTION MEETING, CONTACT THE BUTLER COUNTY STORM WATER DISTRICT. THE OHIO EPA HAS IDENTIFIED BUTLER COUNTY AND FAIRFIELD TOWNSHIP AS A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE OHIO ONE CALL SYSTEM INC. AT 1-800-362-2764 FOR BURIED UTILITIES LOCATION.

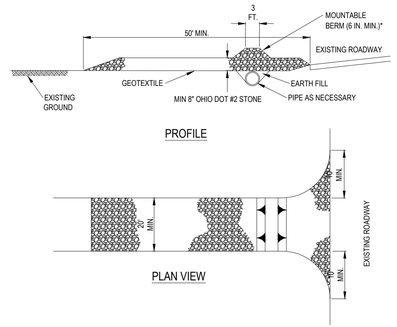
BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE BUTLER COUNTY STORM WATER DISTRICT AND/OR OHIO EPA. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

1. A PRE-CONSTRUCTION MEETING MUST BE HELD



X-8 ***TEMPORARY SOIL STOCKPILE DETAIL***

NOT TO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

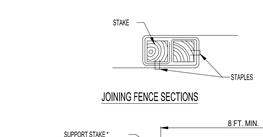
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

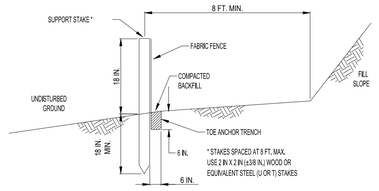
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

#3-1 ***STANDARD CONSTRUCTION DETAIL ROCK CONSTRUCTION ENTRANCE***

NOT TO SCALE



JOINING FENCE SECTIONS



SECTION VIEW

NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

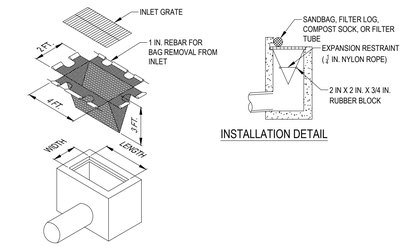
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

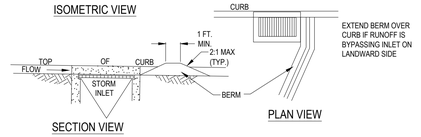
ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

#4-7 ***STANDARD CONSTRUCTION DETAIL STANDARD SILT FENCE (18" HIGH)***

NOT TO SCALE





NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

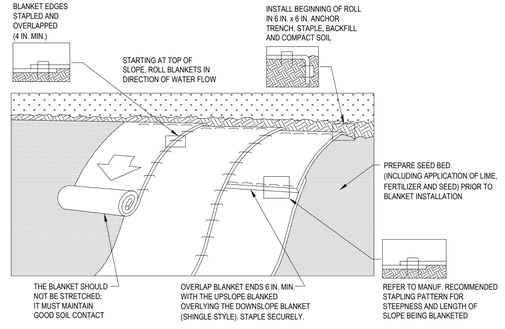
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

#4-15 ***STANDARD CONSTRUCTION DETAIL FILTER BAG INLET PROTECTION - TYPE C INLET***

NOT TO SCALE



NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

#11-1 ***EROSION CONTROL BLANKET INSTALLATION***

NOT TO SCALE

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
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PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	08/05/2022	PER CLIENT COMMENTS	CCP / KJB
2	08/25/2022	PER CLIENT COMMENTS	CCP / KJB
3	11/30/2022	PER ARCH REVISIONS	CCP / KJB
4	02/07/2023	PER ARCH REVISIONS	CCP / KJB
5	04/07/2023	PER TOWNSHIP COMMENTS	CCP / LRB
6	05/22/2023	PER CLIENT COMMENTS	CCP / LRB
7	05/30/2023	PER CLIENT COMMENTS	CCP / LRB
8	06/21/2023	PER COUNTY COMMENTS	CCP / LRB

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PROJECT No.: PAD220070.00
DRAWN BY: CCP
CHECKED BY: KJB
DATE: 07/29/2022
CAD I.D.: PAD220070.00-CNDS-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
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www.BohlerEngineering.com

STATE OF OHIO — MICHAEL K. WEAVER — LANDSCAPE ARCHITECT — 2101558 — REGISTERED

REVISED PER LA 2101558 PROJECT

SHEET TITLE:

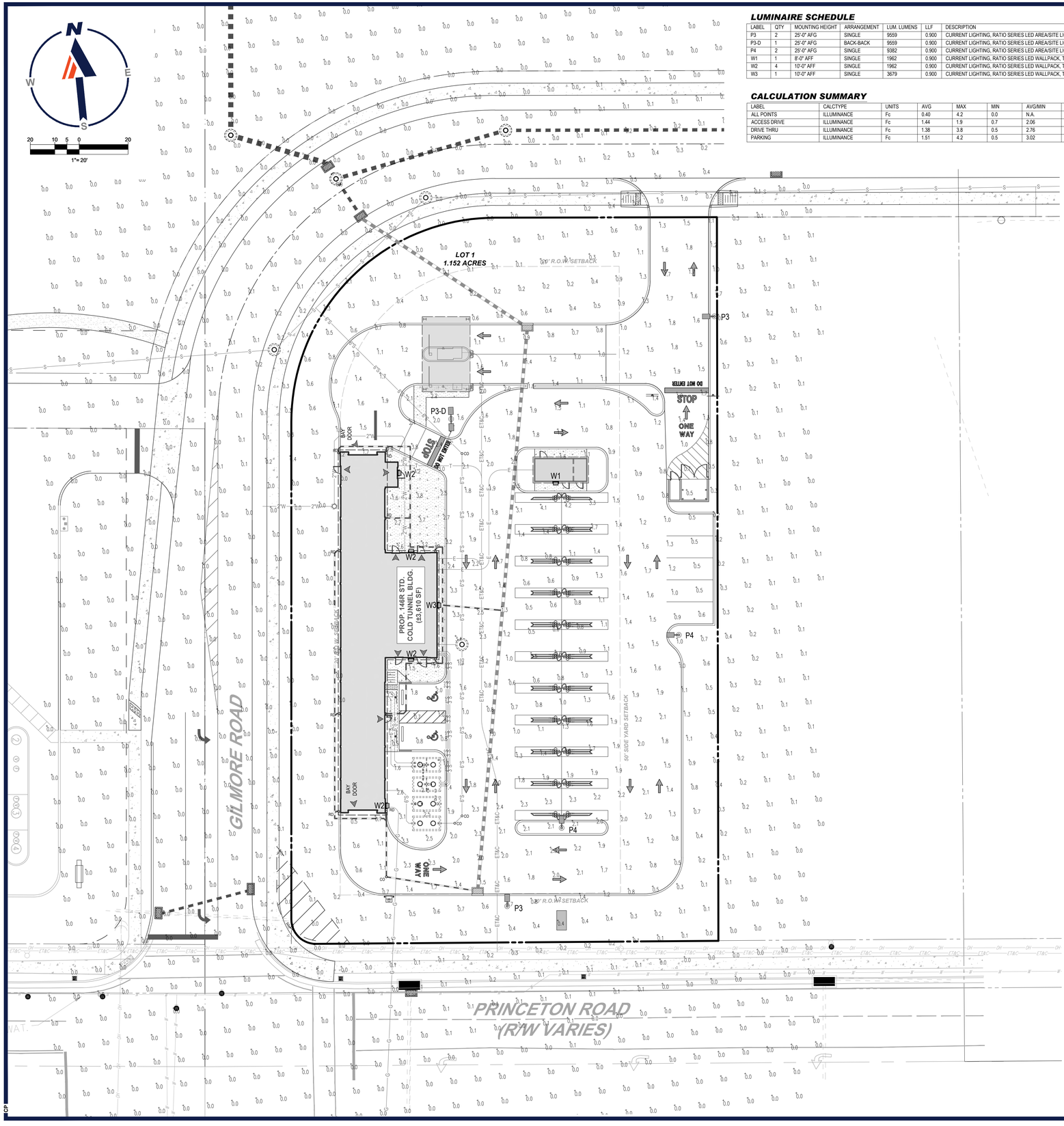
SOIL EROSION & SEDIMENT POLLUTION CONTROL DETAILS

SHEET NUMBER:

C-603

REVISION 8 - 06/21/2023

R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-CNDS-8B-----LAYOUT1 C-603 E&S DETAILS
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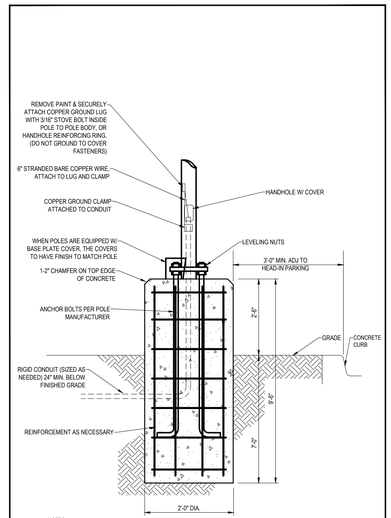


LUMINAIRE SCHEDULE

LABEL	QTY	MOUNTING HEIGHT	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P3	2	25'-0" AFG	SINGLE	9559	0.900	CURRENT LIGHTING, RATIO SERIES LED AREA/SITE LIGHTER, TYPE 3, ZERO UP-LIGHT (RAR1-160L-70-5K7-3-x-x-ASQ-BLT)	CURRENT LIGHTING, STRAIGHT SQUARE STEEL POLE, 22'-6" LENGTH (SSS-B-22.5-40-A-1-B3-BLT)
P3-D	1	25'-0" AFG	BACK-BACK	9559	0.900	CURRENT LIGHTING, RATIO SERIES LED AREA/SITE LIGHTER, TYPE 3, ZERO UP-LIGHT (RAR1-160L-70-5K7-3-x-x-ASQ-BLT)	CURRENT LIGHTING, STRAIGHT SQUARE STEEL POLE, 22'-6" LENGTH (SSS-B-22.5-40-A-2-B3-BLT)
P4	2	25'-0" AFG	SINGLE	9382	0.900	CURRENT LIGHTING, RATIO SERIES LED AREA/SITE LIGHTER, TYPE 4W, ZERO UP-LIGHT (RAR1-160L-70-5K7-4W-x-x-ASQ-BLT)	CURRENT LIGHTING, STRAIGHT SQUARE STEEL POLE, 22'-6" LENGTH (SSS-B-22.5-40-A-1-B3-BLT)
W1	1	8'-0" AFF	SINGLE	1962	0.900	CURRENT LIGHTING, RATIO SERIES LED WALLPACK, TYPE 3, ZERO UP-LIGHT (RWL1-48L-15-5K7-3-x-BLT-PC)	----------
W2	4	10'-0" AFF	SINGLE	1962	0.900	CURRENT LIGHTING, RATIO SERIES LED WALLPACK, TYPE 3, ZERO UP-LIGHT (RWL1-48L-15-5K7-3-x-BLT-PC)	----------
W3	1	10'-0" AFF	SINGLE	3679	0.900	CURRENT LIGHTING, RATIO SERIES LED WALLPACK, TYPE 4W, ZERO UP-LIGHT (RWL1-48L-25-5K7-4W-x-BLT-PC)	----------

CALCULATION SUMMARY

LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.40	4.2	0.0	N.A.	N.A.
ACCESS DRIVE	ILLUMINANCE	Fc	1.44	1.9	0.7	2.06	2.71
DRIVE THRU	ILLUMINANCE	Fc	1.38	3.8	0.5	2.76	7.60
PARKING	ILLUMINANCE	Fc	1.51	4.2	0.5	3.02	8.40



NOTES:
1. THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL ENSURE DESIGN IS PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS, SITE SPECIFIC SOIL PARAMETERS.
2. ALL REBAR SHALL HAVE A YIELD STRENGTH OF 60ksi, AND MAINTAIN A 3" MIN. CLEARANCE FROM SURFACES.

I-3 — ***LIGHT POLE FOUNDATION DETAIL***

NOT TO SCALE

GENERAL LIGHTING NOTES

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE ELECTRICAL CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE ELECTRICAL CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE PLANS, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL AGENCY AND GOVERNMENTAL REGULATIONS.
3. THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER. ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
4. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDLES (FC).
5. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND RE-LAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN UPON COMPLETION AND OWNER'S ACCEPTANCE OF THE WORK. THE ABOVE RESPONSIBILITIES BECOMES SOLELY THE OWNER'S.
6. THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES. POWER SYSTEM, CONDUITS, WIRING AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECT'S, MECHANICAL ENGINEER'S AND/OR ELECTRICAL CONTRACTOR'S RESPONSIBILITY, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THE CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES.
7. THE ELECTRICAL CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURE(S) TO THE ENGINEER OF RECORD'S ATTENTION, PRIOR TO THE START OF CONSTRUCTION.
8. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.
9. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.
10. THE LIGHT LOSS FACTORS (LLF) DEPICTED IN THE LUMINAIRE SCHEDULE ON THIS PLAN ARE BASED ON DATA PROVIDED BY THE MANUFACTURER FOLLOWING IES LM-80-08 TESTING. THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF LISTED IN THE LUMINAIRE SCHEDULE.
11. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE PROJECT ENGINEER (BOHLER) FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE LUMINAIRE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.

BOHLER
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PROJECT No.: PAD220070.00
DRAWN BY: CCP
CHECKED BY: KJB
DATE: 07/26/2022
CAD I.D.: PAD220070.00-LGT-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212
Phone: (724) 638-8500
www.BohlerEngineering.com

STATE OF OHIO — MICHAEL W. TAKACS — EXPIRES 12/31/2023 — REGISTERED LANDSCAPE ARCHITECT — PENNSYLVANIA LICENSE No. LA-005794 — LANDSCAPE ARCHITECT

SHEET TITLE:

LIGHTING PLAN

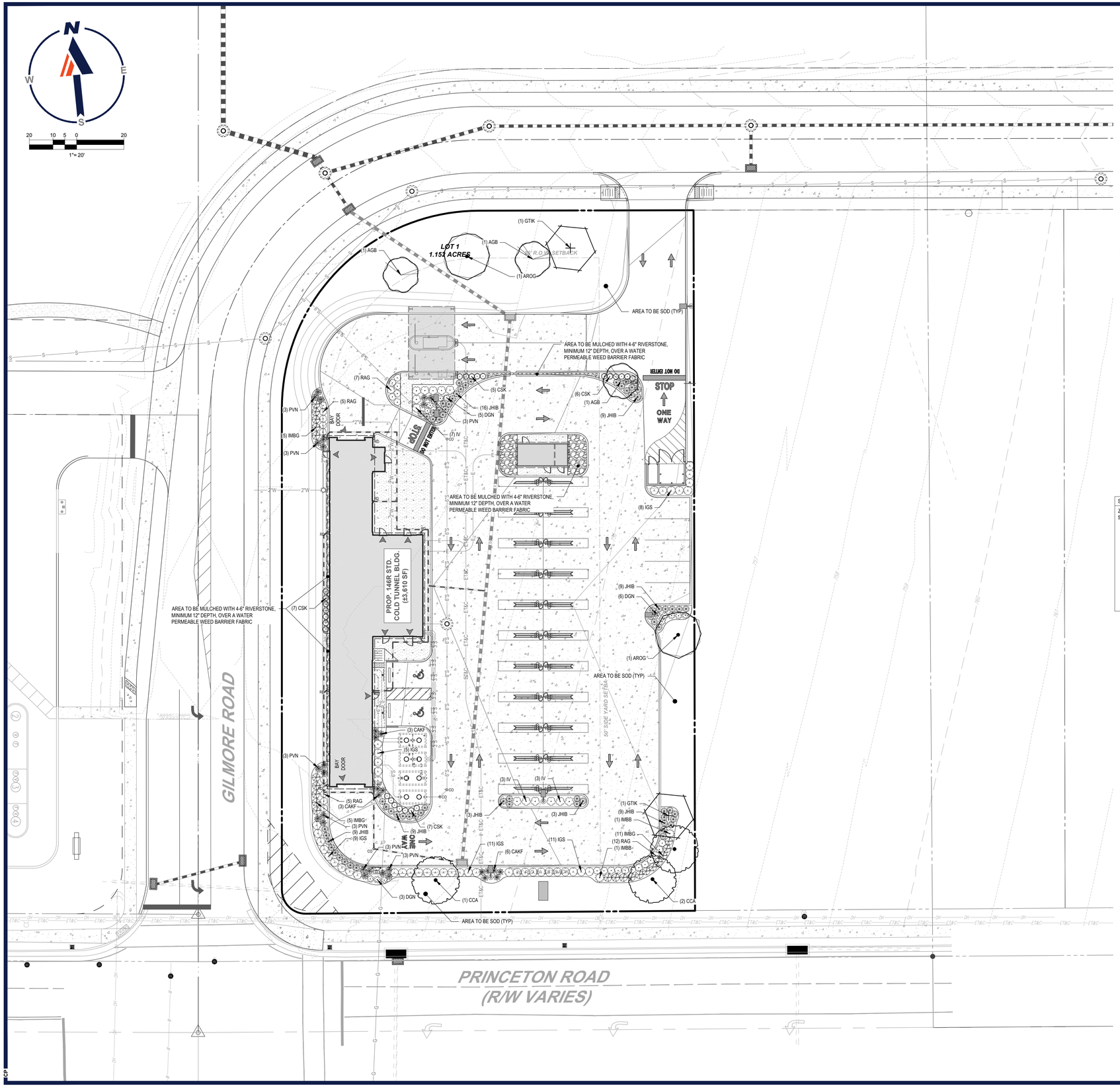
SHEET NUMBER:

C-701

REVISION 8 - 06/21/2023

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ACP



TIDAL WAVE LANDSCAPE NOTES:

1. ALL DISTURBED AREAS NOT COVERED BY STRUCTURES, PAVING OR LANDSCAPING SHALL BE SODDED. NO SEEDING SHALL BE USED.
2. ALL PLANT BEDS SHALL BE UNDERLAIN WITH LANDSCAPING FABRIC AND HAVE 3" OF DYED BROWN OR BLACK WOOD MULCH WITH EDGING AS REQUIRED. NO PINE STRAW MULCH WILL BE ALLOWED.
3. ALL RIVER ROCK SHALL BE 4"-6" MINIMUM IN DIAMETER AND SHALL BE UNDERLAIN WITH LANDSCAPING FABRIC.
4. ALL UNDERGROUND IRRIGATION SYSTEM, SHALL BE INSTALLED AND SHALL COMPLY WITH ALL LOCAL MUNICIPAL CODES AND REGULATIONS AND ALSO COMPLY WITH THE LATEST NATIONAL ELECTRIC CODE RULES FOR ALL ELECTRIC WORKS AND MATERIALS.
5. IF THERE IS NO PLANT BED AGAINST THE CAR WASH TUNNEL, VAC HOUSE(S), OR DUMPSTER ENCLOSURE, THEN THERE SHALL BE AN 18 INCH MINIMUM STRIP OF RIVER ROCK INSTALLED.

GENERAL NOTES:

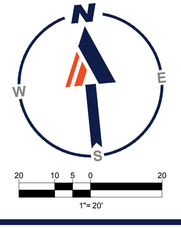
1. THIS PLAN IS TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY.
2. ALL DISTURBED UNPAVED AREAS, EXCLUDING PLANTING BEDS, ARE TO BE INSTALLED AS LAWN IN ACCORDANCE WITH LANDSCAPE SPECIFICATION #2.C., UNLESS OTHERWISE STATED ON THIS PLAN.
3. SHRUBS PLANTED ALONG HEAD-IN PARKING STALLS SHALL BE INSTALLED TO ALLOW A CLEARANCE OF TWO FEET FROM FACE OF CURB TO ALLOW FOR BUMPER OVERHANG.
4. IF IRRIGATION IS REQUIRED BY THE OWNER OR APPROVING MUNICIPALITY, THE CONTRACTOR SHALL PROVIDE AN IRRIGATION SYSTEM MEETING THE SPECIFICATIONS OF THE CHOSEN PRODUCT'S MANUFACTURER. THE IRRIGATION DESIGN SHALL ACCOMMODATE LAWN AND BED AREAS EACH UNDER SEPARATE ZONES TO MAXIMIZE WATER EFFICIENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ANY PERMITS REQUIRED FOR THE INSTALLATION OF AN IRRIGATION SYSTEM.
5. PLANT MATERIAL SUBSTITUTIONS MUST BE FORMALLY SUBMITTED TO BOHLER ENGINEERING AND THE MUNICIPAL ENGINEER AND LANDSCAPE CONSULTANTS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ANY PLANT MATERIAL THAT ARE TO BE INSTALLED WITHIN STORMWATER BMP FEATURES MUST BE NATIVE SPECIES.
6. WITHOUT EXCEPTION, WEED BARRIER FABRIC SHALL NOT BE INSTALLED WITHIN ANY BMP FACILITY. BMP FACILITIES INCLUDE RAINGARDENS, INFILTRATION TRENCHES, VEGETATIVE SWALES AND STORMWATER BASINS.

PLANT SCHEDULE

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
AROG	2	ACER RUBRUM `OCTOBER GLORY`	OCTOBER GLORY RED MAPLE	2.5" CAL.	B&B
CCA	3	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2.5" CAL.	B&B
GTIK	2	GLEDITSIA TRIACANTHOS INERMIS `SKYCOLE`	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B
ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
AGB	3	AMELANCHIER X GRANDIFLORA `AUTUMN BRILLIANCE`	AUTUMN BRILLIANCE SERVICEBERRY	2-2 1/2" CAL.	B&B
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CSK	25	CORNUS SERICEA `KELSEYI`	KELSEYI DOGWOOD	15-18"	CONTAINER
DGN	14	DEUTZIA GRACILIS `NIKKO`	SLENDER DEUTZIA	18-24"	CONTAINER
IGS	44	ILEX GLABRA `SHAMROCK`	SHAMROCK INKBERRY	24-30"	CONTAINER
IMBB	2	ILEX X MESERVEAE `BLUE BOY`	BLUE BOY HOLLY	24-30"	CONTAINER
IMBG	21	ILEX X MESERVEAE `BLUE GIRL`	BLUE GIRL HOLLY	24-30"	CONTAINER
IV	13	ITEA VIRGINICA `HENRY`S GARNET`	HENRY`S GARNET SWEETSPIRE	24-30"	CONTAINER
JHIB	67	JUNIPERUS HORIZONTALIS `MONBER`	ICEE BLUE JUNIPER	15-18" SPRD	CONTAINER
RAG	29	RHUS AROMATICA `GRO-LOW`	GRO-LOW FRAGRANT SUMAC	15-18"	CONTAINER
GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CAKF	12	CALAMAGROSTIS X ACUTIFLORA `KARL FOERSTER`	FEATHER REED GRASS	1 GAL.	CONTAINER
PVN	21	PANICUM VIRGATUM `NORTH WIND`	NORTHWIND SWITCH GRASS	1 GAL.	CONTAINER

COMPLIANCE CHART

SECTION	REQUIREMENT	CALCULATIONS (REQUIRED / PROVIDED)	COMPLIANCE
ZONING: 520 SCREENING	3. HEIGHT OF SCREENING SHALL BE IN ACCORDANCE WITH THE FOLLOWING: A. VISUAL SCREENING WALLS, FENCES, PLANTINGS, OR MOUNDS SHALL BE A MINIMUM OF FIVE AND ONE-HALF FEET HIGH IN ORDER TO ACCOMPLISH THE DESIRED SCREENING EFFECT, EXCEPT IN REQUIRED FRONT YARDS WHERE MAXIMUM HEIGHT SHALL BE NOT GREATER THAN TWO AND ONE-HALF FEET. PLANTINGS SHALL BE A MINIMUM OF FOUR FEET IN HEIGHT AT THE TIME OF PLANTING. B. A DENSE VEGETATIVE PLANTING WITH A MINIMUM HEIGHT OF FOUR FEET AT PLANTING AND A MATURE HEIGHT OF AT LEAST FIVE AND ONE-HALF FEET OR GREATER, OR A SOLIDLY CONSTRUCTED DECORATIVE FENCE, OF A MINIMUM HEIGHT OF FIVE AND ONE-HALF FEET, SHALL BE PERMANENTLY MAINTAINED ALONG THE MUTUAL BOUNDARY OF AN ACCESSORY PARKING AREA AND ADJACENT LAND ZONED FOR, OR USED FOR, RESIDENTIAL PURPOSES, IN COMPLIANCE WITH SECTION 518.	SCREENING SHRUBS HAVE BEEN PROVIDED ALONG PRINCETON ROAD.	COMPLIES



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PROJECT NO.: PAD220070.00
DRAWN BY: CCP
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DATE: 07/29/2022
CAD I.D.: PAD220070.00-LGT-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

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STATE OF OHIO
MICHAEL W. TAKACS
REGISTERED LANDSCAPE ARCHITECT
PERMANENT LICENSE NO. 2019004694
PROFESSIONAL LANDSCAPE ARCHITECT

SHEET TITLE:

LANDSCAPE PLAN

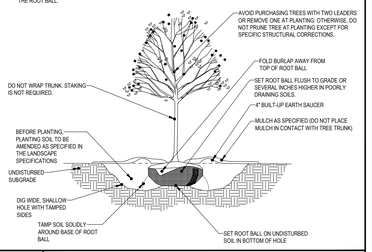
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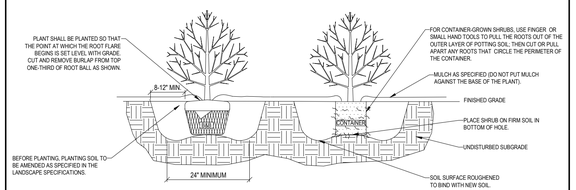
NOTES:

1.) NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2.) REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD OR CUT BURLAP BACK FROM TOP 1/3 OF ROOT BALL.
3.) PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4.) THOUROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5.) THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE SCARIFIED TO AVOID MATTING OF SOIL.
6.) THE MINIMUM DIAMETER OF THE TREE PIT SHALL BE 3 TIMES THE DIAMETER OF THE ROOT BALL.



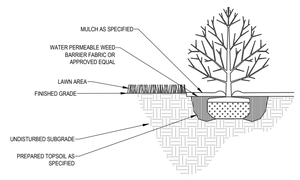
L-1	***DECIDUOUS TREE PLANTING DETAIL***

NOT TO SCALE



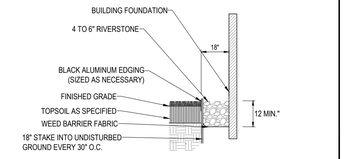
L-5	***SHRUB PLANTING DETAIL***

NOT TO SCALE



L-13	***WEED BARRIER FABRIC DETAIL***

NOT TO SCALE



L-15	***RIVER STONE INSTALLATION DETAIL***

NOT TO SCALE

LANDSCAPE SPECIFICATIONS:

1. SCOPE OF WORK:
THE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS
A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATIONS SPECIFICATIONS.

B. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 5.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.

C. LAWN - LAWN AREAS SHALL BE SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES. FOR SOIL BED PREPARATIONS, REFER TO ITEM B BELOW.
I. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
II. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE-PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

D. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.

E. FERTILIZER
I. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
II. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

F. PLANT MATERIAL
I. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY AMERICAN HORT (FORMERLY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION).
II. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
III. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
IV. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1¼", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
V. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH. WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
VI. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
VII. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
VIII. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

3. GENERAL WORK PROCEDURES
A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.

4. SITE PREPARATIONS
A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.

B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.

C. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.

5. TREE PROTECTION
A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.

B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY "VISI-FENCE", OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.

C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

6. SOIL MODIFICATIONS
A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.

B. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE CONTRACTOR DEPENDING ON SITE CONDITIONS.

C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
I. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
II. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
III. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

7. FINISHED GRADING
A. UNLESS OTHERWISE CONTRACTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.

B. CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"+).

C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

8. TOPSOILING
A. CONTRACTOR SHALL PROVIDE A SIX INCH (6") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AND LAWN AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.

B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

C. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.

D. ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY (SEE SPECIFICATION 6.A.3):
I. 20 POUNDS 'GRO-POWER' OR APPROVED EQUAL SOIL CONDITIONER/FERTILIZER
II. 20 POUNDS 'NITRO-FORM (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER

E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

9. PLANTING
A. INSCAPE THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.

C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.

D. ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.

E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS: THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
I. PLANTS: MARCH 15TH TO DECEMBER 15TH
II. LAWN AND SEED MIXES: MARCH 1ST TO MAY 15TH OR BETWEEN AUGUST 15TH AND OCTOBER 15TH

PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.

G. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY. THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES

H. PLANTING PITS SHALL BE DUG WITH LEVEL OR CONVEX BOTTOMS, WITH THE WIDTH THREE TIMES THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
I. 1 PART PEAT MOSS
II. 1 PART COMPOSTED COW MANURE BY VOLUME
III. 3 PARTS TOPSOIL BY VOLUME
IV. 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
A) 2 TABLETS PER 1 GALLON PLANT
B) 3 TABLETS PER 5 GALLON PLANT
C) 4 TABLETS PER 15 GALLON PLANT
D) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK

I. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.

J. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.

K. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE. NO PRUNING SHALL BE CONDUCTED WITHIN THE FIRST YEAR OF PLANTING.

L. GROUND COVER AREAS SHALL RECEIVE A ½" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.

M. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.

N. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.

O. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

10. TRANSPLANTING (WHEN REQUIRED)
A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT. (SEE SPECIFICATION 2.F. ABOVE)

B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.

C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10TH AND JUNE 30TH.

D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.

E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.

F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.

11. WATERING
A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.

B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.

C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

12. GUARANTEE
A. THE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION. A PLANT SHALL BE CONSIDERED "DEAD OR DYING" IF MORE THAN 30% OF ITS BRANCHES ARE DEAD.

C. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND UNTIL TURNOVER TO THE OWNER/OPERATOR. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.

D. LAWNS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND UNTIL TURNOVER TO THE OWNER/OPERATOR THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

13. CLEANUP
A. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.

B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

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DRAWN BY:	CCP
CHECKED BY:	KJB
DATE:	07/28/2022
CAD I.D.:	PAD220070.00-LLGT-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A03001720000005

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STATE OF OHIO
MATTHEW TAKACS
MICHAEL
8/5/2022
REGISTERED LANDSCAPE ARCHITECT
PERSONAL LICENSE NO. LA.0002694
PROFESSIONAL SEAL
LANDSCAPE ARCHITECT

SHEET TITLE:

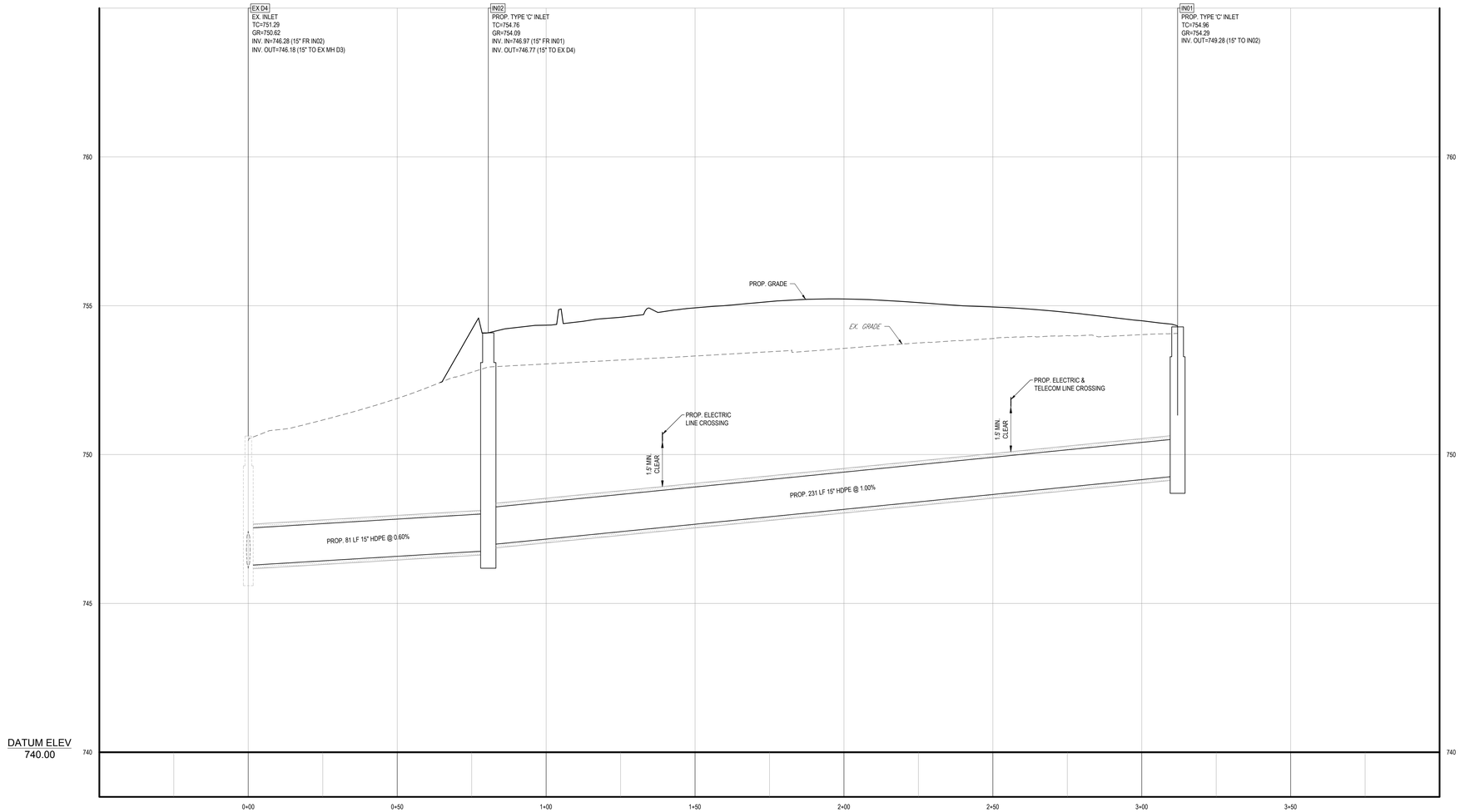
LANDSCAPE DETAILS

SHEET NUMBER:

C-703

REVISION 8 - 06/21/2023

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CCP



IN01 - EX D4

SCALE: 1"= 20 ' HORIZONTAL
1"= 2 ' VERTICAL

2 1 0.5 0 2
1"= 2'

20 10 5 0 20
1"= 20'

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ACP

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PROJECT No.: PAD220070.00
DRAWN BY: CCP
CHECKED BY: KJB
DATE: 07/29/2022
CAD I.D.: PAD220070.00-PROF-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

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MICHAEL J. TAFT
EXPIRES: 12/31/2023
REGISTERED LANDSCAPE ARCHITECT
REGISTERED LA 2101568
PROFESSIONAL ENGINEERS
OHIO REGISTRATION NO. 94
OHIO REGISTRATION NO. 75

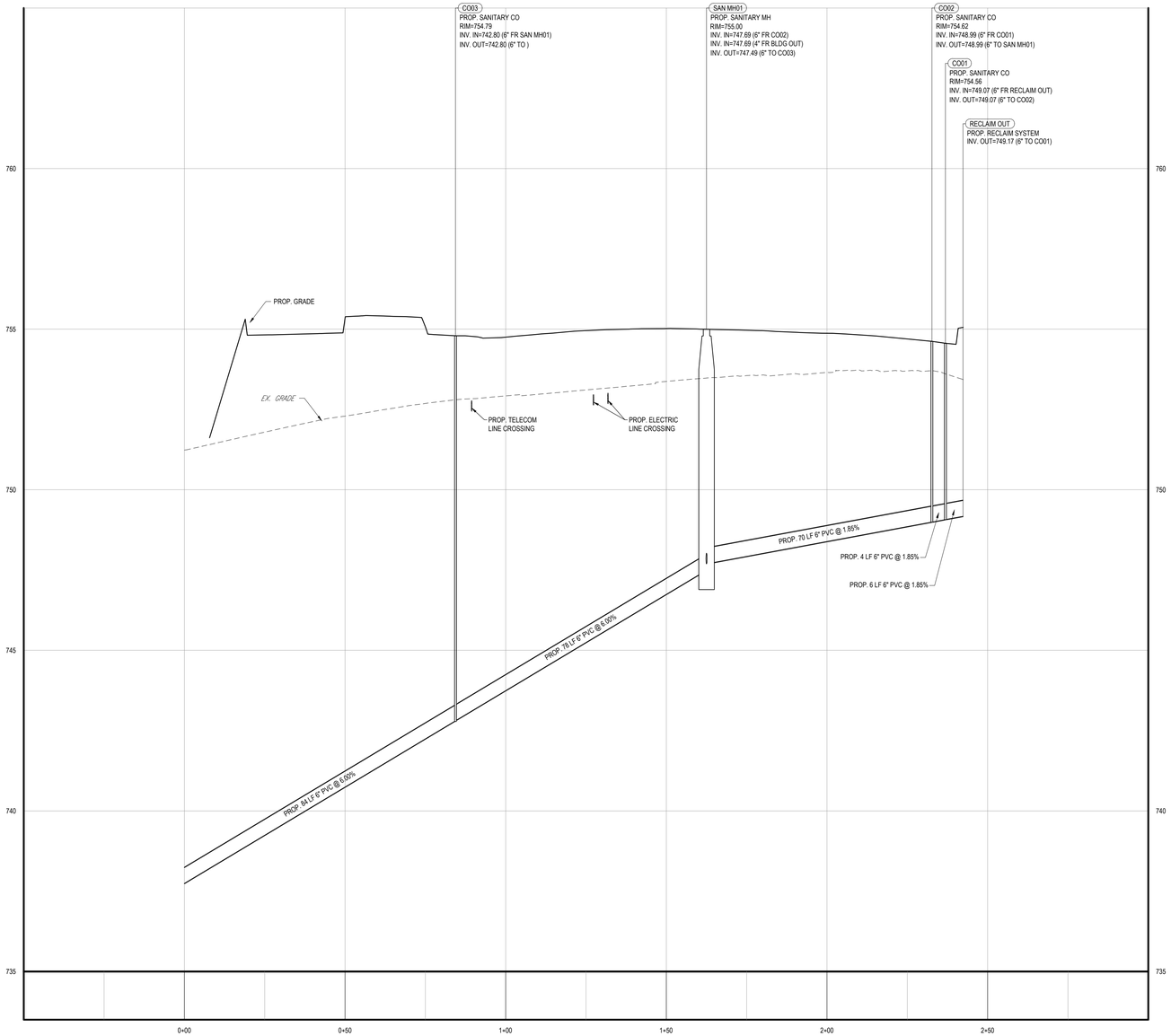
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SHEET NUMBER:

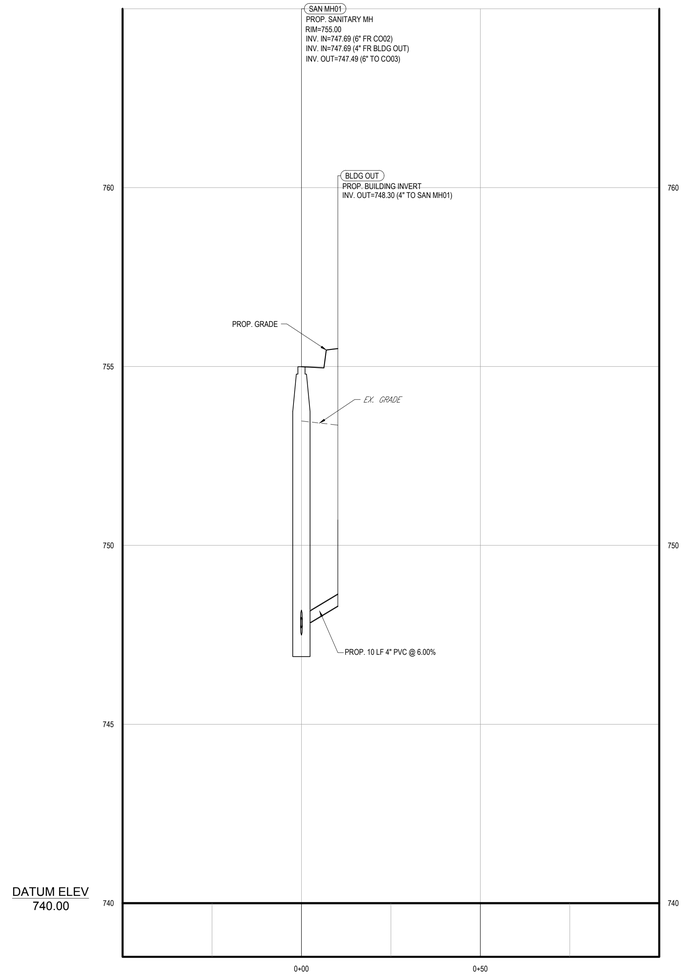
C-801

REVISION 8 - 06/21/2023



RECLAIM OUT TO EX S3

SCALE: 1"= 20 ' HORIZONTAL
1"= 2 ' VERTICAL



BLDG OUT TO SAN MH01

SCALE: 1"= 20 ' HORIZONTAL
1"= 2 ' VERTICAL

2 1 0.5 0 2
1"= 2'

20 10 5 0 20
1"= 20'

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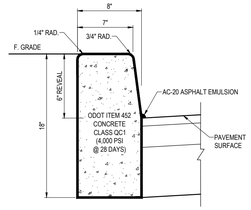
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PROFILES PLAN

SHEET NUMBER:

C-802

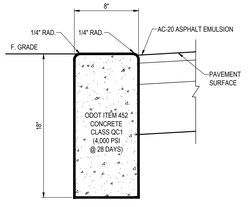
REVISION 8 - 06/21/2023



TRANSVERSE JOINTS 3/4" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND SHALL BE FILLED WITH CELLULAR COMPRESSION MATERIAL AS SPECIFIED RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

P-1 ***TYPICAL CONCRETE CURB DETAIL***

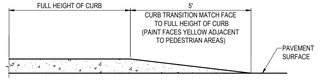
NOT TO SCALE



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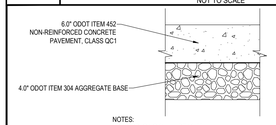
P-2 ***TYPICAL FLUSH CONCRETE CURB DETAIL***

NOT TO SCALE



P-3 ***TAPERED CURB DETAIL***

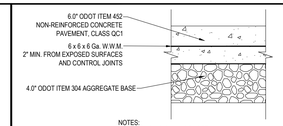
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NOTES:
JOINT SPACING SHALL BE 12 FT.
PAVEMENT SECTION VERIFIED AND APPROVED BY ECS GEOTECHNICAL REPORT, DATED 02/08/2022.

P-15 ***CONCRETE PAVEMENT DETAIL***

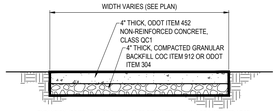
NOT TO SCALE



NOTES:
JOINT SPACING SHALL BE 12 FT.
PAVEMENT SECTION VERIFIED AND APPROVED BY ECS GEOTECHNICAL REPORT, DATED 02/08/2022.

P-16 ***REINFORCED CONCRETE PAVEMENT DETAIL***

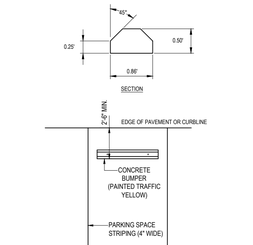
NOT TO SCALE



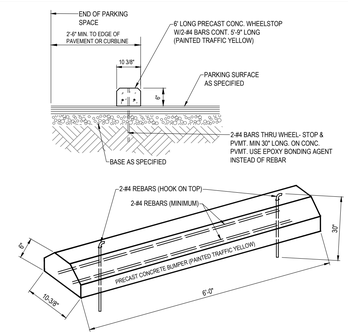
EXPANSION JOINTS 1/2" WIDE PREMOLDED BIT. MATERIAL SHALL BE INSTALLED AT 30' INTERVALS. CONTRACTION JOINTS TO BE SPACED AT EQUAL INTERVALS, 5' MAXIMUM LENGTH.

P-21 ***CONCRETE SIDEWALK DETAIL***

NOT TO SCALE

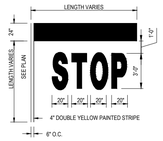


NOTES:
1.) REFER TO PLAN SET FOR LOCATIONS OF PROPOSED WHEELSTOPS.
2.) CONCRETE WHEELSTOPS SHALL BE PAINTED TRAFFIC YELLOW SO AS TO CONTRAST WITH PAVEMENT SURFACE. WHEELSTOPS MUST BE PERPETUALLY MAINTAINED AND REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.



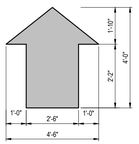
P-26 ***CONCRETE WHEEL STOPS DETAIL***

NOT TO SCALE



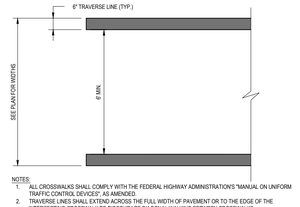
T-5 ***WHITE PAINTED STOP BAR & "STOP" LETTERING DETAIL***

NOT TO SCALE



T-7 ***WHITE PAINTED TRAFFIC ARROW DETAIL***

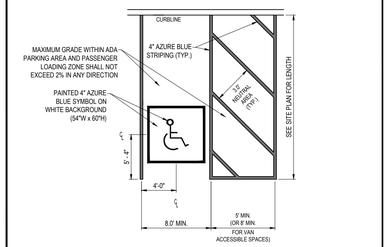
NOT TO SCALE



NOTES:
1. ALL CROSSWALKS SHALL COMPLY WITH THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS AMENDED.
2. TRAVERSE LINES SHALL EXTEND ACROSS THE FULL WIDTH OF PAVEMENT OR TO THE EDGE OF THE INTERSECTING CROSSWALK TO DISCOURAGE DIAGONAL WALKING BETWEEN CROSSWALKS.
3. ALL CROSSWALK TRAVERSE LINES SHALL BE BE WHITE THERMOPLAST AND SHALL BE OF EQUAL WIDTHS.

T-24 ***STANDARD CROSSWALK DETAIL***

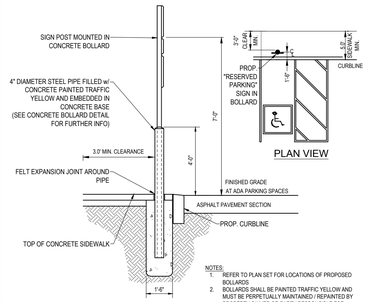
NOT TO SCALE



NOTES:
1. CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED PASSENGER LOADING ZONE.
2. CURB RAMPS, PAVEMENT MARKINGS, AND APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

T-13 ***ADA ACCESSIBLE PARKING SPACE STRIPING (1 SPACE)***

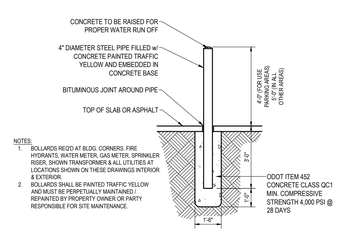
NOT TO SCALE



NOTES:
1. REFER TO PLAN SET FOR LOCATIONS OF PROPOSED BOLLARDS
2. BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED / REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.

T-18 ***RESERVED PARKING SIGN WITHIN BOLLARD DETAIL***

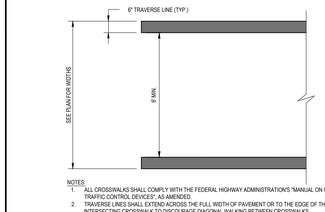
NOT TO SCALE



NOTES:
1. BOLLARDS REQ'D AT BLDG. CORNERS, FIRE HYDRANTS, WATER METER, GAS METER, SPRINKLER RISER, SHOWN TRANSFORMER & ALL UTILITIES AT LOCATIONS SHOWN ON THESE DRAWINGS INTERIOR & EXTERIOR.
2. BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED / REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.

T-20 ***BOLLARD DETAIL***

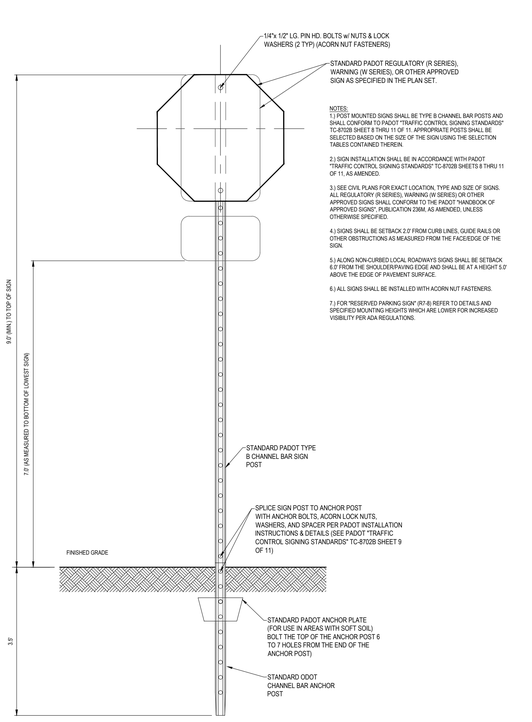
NOT TO SCALE



NOTES:
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2. TRAVERSE LINES SHALL EXTEND ACROSS THE FULL WIDTH OF PAVEMENT OR TO THE EDGE OF THE INTERSECTING CROSSWALK TO DISCOURAGE DIAGONAL WALKING BETWEEN CROSSWALKS.
3. ALL CROSSWALK TRAVERSE LINES SHALL BE BE WHITE THERMOPLAST AND SHALL BE OF EQUAL WIDTHS.

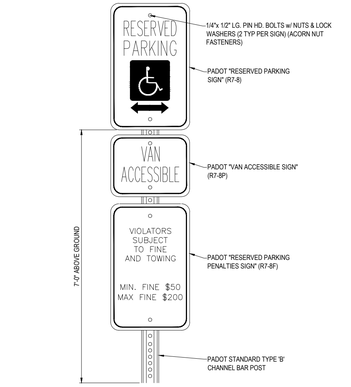
T-24 ***STANDARD CROSSWALK DETAIL***

NOT TO SCALE



T-11 ***STANDARD POLE MOUNTED SIGN INSTALLATION DETAIL***

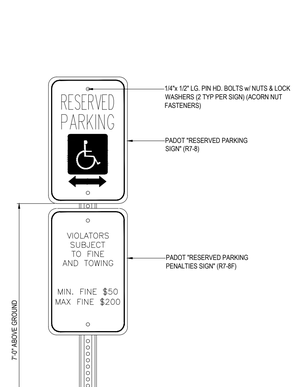
NOT TO SCALE



NOTES:
1. POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B SHEET 8 THRU 11 OF 11. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN.
2. SIGN INSTALLATION SHALL BE IN ACCORDANCE WITH PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B SHEETS 8 THRU 11 OF 11, AS AMENDED.
3. SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES), SIGNS SHALL CONFORM TO THE PADOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.
4. SIGNS SHALL BE SETBACK 2.0' FROM CURB LINES OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.
5. RESERVED PARKING SPACE SIGNS SHALL CONFORM TO DEPARTMENT OF JUSTICE "ADA STANDARDS FOR ACCESSIBLE DESIGN" AS AMENDED.
6. ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.

T-14 ***RESERVED PARKING SPACE WITH PENALTIES & VAN ACCESSIBLE SIGNS***

NOT TO SCALE



T-15 ***RESERVED PARKING SPACE & PENALTIES SIGNS***

NOT TO SCALE

R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-CNDS-8B-----LAYOUT: C-901 DETAILS
CCP

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
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PROJECT No.:	PAD220070.00
DRAWN BY:	CCP
CHECKED BY:	KJB
DATE:	07/29/2022
CAD I.D.:	PAD220070.00-CNDS-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

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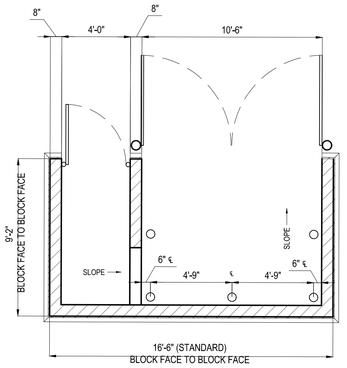
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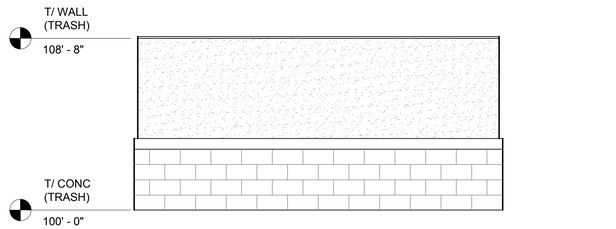
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C-901

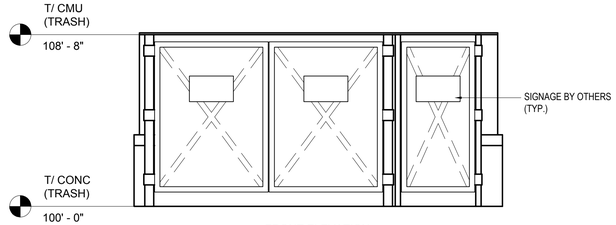
REVISION 8 - 06/21/2023

NOTE:
SEE ARCHITECTURAL FOR SECTION DETAILS AND MATERIALS LIST.

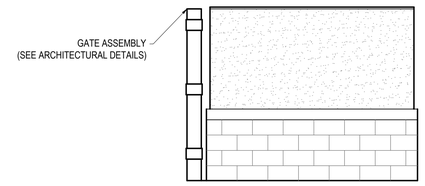




REAR ELEVATION



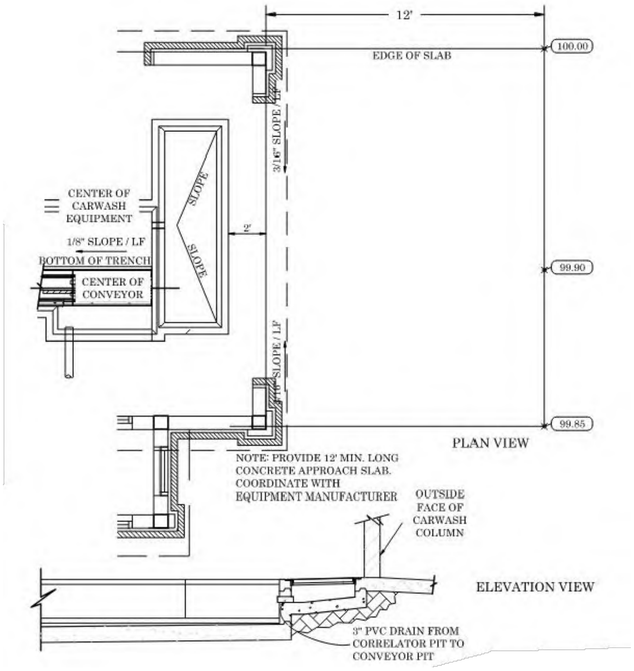
FRONT ELEVATION



SIDE ELEVATION

TIDAL WAVE TRASH ENCLOSURE DETAIL

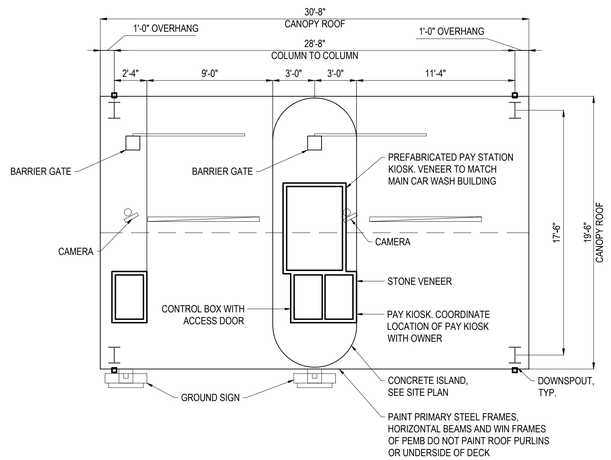
N.T.S.

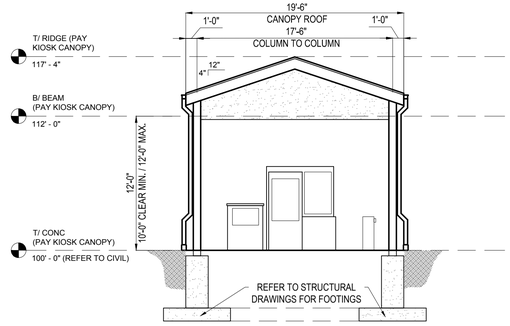


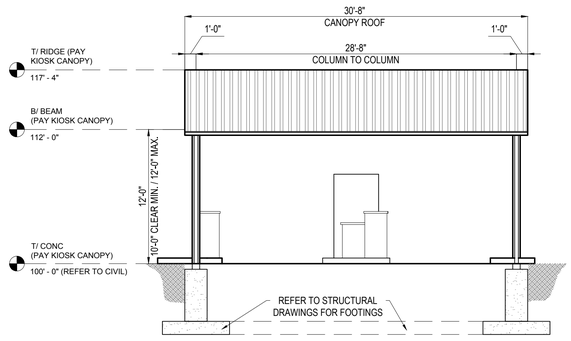
TIDAL WAVE COLD WEATHER ENTRANCE DETAIL (FRONT WHEEL PULL)

N.T.S.

NOTE:
SEE ARCHITECTURAL FOR SECTIONS AND MATERIALS SPECIFICATIONS.

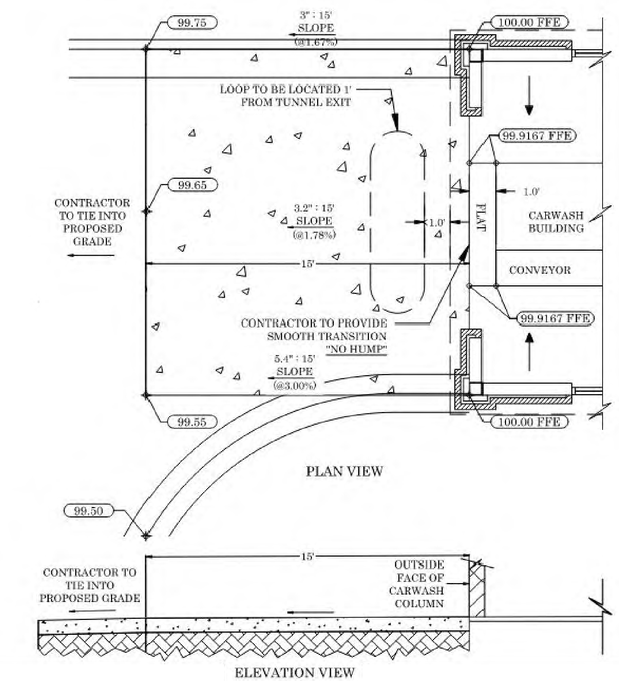






TIDAL WAVE PAY KIOSK DETAIL

N.T.S.



TIDAL WAVE COLD WEATHER EXIT DETAIL (FRONT WHEEL PULL)

N.T.S.

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CAD I.D.: PAD220070.00-CNDS-8B

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FOR

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PROPOSED CAR WASH

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3003 BRIDGEWATER LANDING DRIVE
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BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

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LICENSED PROFESSIONAL ENGINEER
OHIO REGISTRATION NUMBER 90

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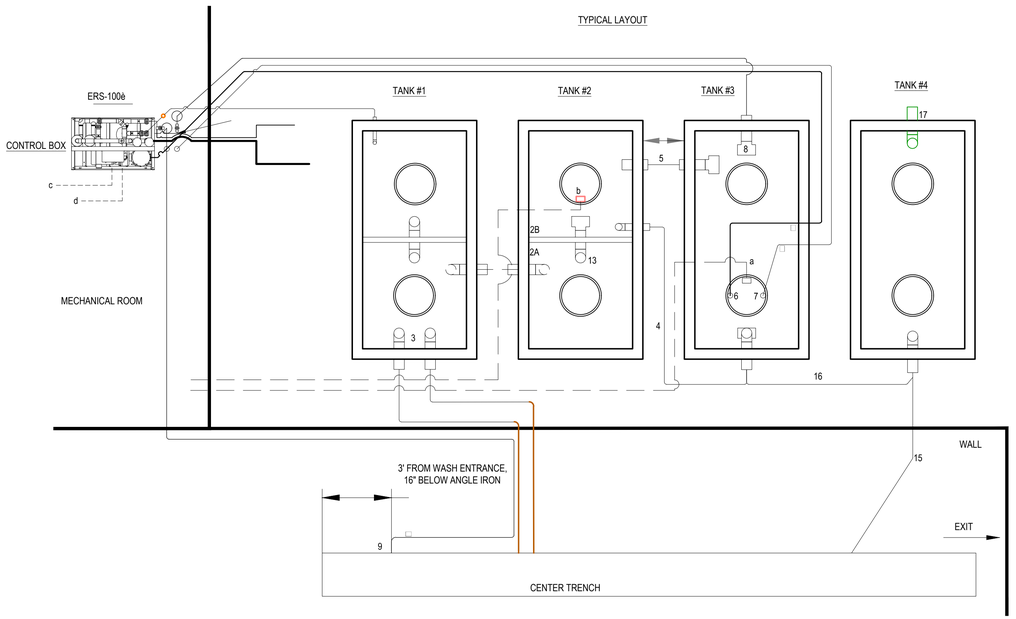
DETAILS

SHEET NUMBER:

C-902

REVISION 8 - 06/21/2023

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NOTES:
- ACTUAL TANK DIMENSIONS MAY VARY.
- PLUMBING SHOULD BE PLACED AS SHOWN REGARDLESS OF WHAT TANKS ARE USED.
- ALL PIPES MUST BE SET BELOW FROST LINE.
- SUCTION LINES MUST BE SCH 80 PVC.
- DO NOT INSTALL SCREENS ON FOOT VALVE.
- CONSULT ENGINEER FOR ELEVATIONS.
- 1 PIECE TANK IS REQUIRED
- MATCH TANK ELEVATION AS SHOWN.

TANKS
TYPICAL 1,500 GAL. PRECAST CONCRETE

TANK #1 - 1A UNDERFLOW - 1B PRIMARY SETTLEMENT
TANK #2 - SECONDARY SETTLEMENT W./ BAFFLE
TANK #3 - PROCESS TANK
TANK #4 - OIL AND WATER SEPARATOR PER MUNICIPAL SPECIFICATIONS

UNDERGROUND PLUMBING

1 - 2" SCH 80 PVC PIPE - UNDERFLOW DISCHARGE - TO TANK 1A
2 - 6" SCH 40 PVC PIPE - EXTERNAL CROSSOVER - FROM TANK 1B TO TANK 2A
3 - TWO 6" SCH 40 PVC PIPES - CENTER TRENCH - TO TANK 1B
4 - 4" OR 6" SCH 40 PVC PIPE - OVERFLOW FROM TANK 2B TO TANK 3
5 - 6" SCH 40 PVC PIPE - EXTERNAL CROSSOVER - FROM TANK 2B TO TANK 3
6 - 3" SCH 80 PVC PIPE - FILTER PUMP SUCTION LINE - FROM TANK 3 *SHOULD HAVE SLIGHT FALL TO RISER. INSTALL 90° AS HIGH AS POSSIBLE ON RISER TO ALLOW FOR EASY MAINTENANCE. NO DEEPER THEN 2' FROM FINISH GRADE*
7 - 3" SCH 80 PVC PIPE - SPARE SUCTION LINE - FROM TANK 3 *COMPLETE PLUMBING ON SPARE SUCTION LINE. UNION & FOOT VALVE SAME AS PRIMARY (6). SHOULD HAVE SLIGHT FALL TO RISER. INSTALL 90° AS HIGH AS POSSIBLE ON RISER TO ALLOW FOR EASY MAINTENANCE.*
8 - 4" OR 6" SCH 40 PVC PIPE - AQUAPREP DISCHARGE - SPLIT TO TANK 3
9 - 4" OR 6" SCH 40 PVC PIPE - AQUAPREP DISCHARGE - SPLIT TO CENTER TRENCH
12 - 6" SCH 40 PVC PIPE - INTERNAL CROSSOVER - FROM TANK 1A TO TANK 1B
13 - 6" SCH 40 PVC PIPE - INTERNAL CROSSOVER - FROM TANK 2A TO TANK 2B
15 - 6" SCH 40 PVC PIPE - TIRE SHINE DRAIN TO TANK 4
16 - 6" SCH 40 PVC PIPE - EXTERNAL CROSSOVER FROM TANK 3 TO TANK 4
17 - PIPE TO SANITARY SEWER

ABOVE GROUND PLUMBING

10 - 2" PIPE - RECLAIM WATER OUTLET - FROM ERS TO CAR WASH EQUIPMENT
11 - 2" PIPE - FRESH WATER INLET - FROM CITY WATER SOURCE TO ERS
14 - 2" SCH 80 PVC PIPE - AQUAPREP DISCHARGE TEE' D W./ BALL VALVES

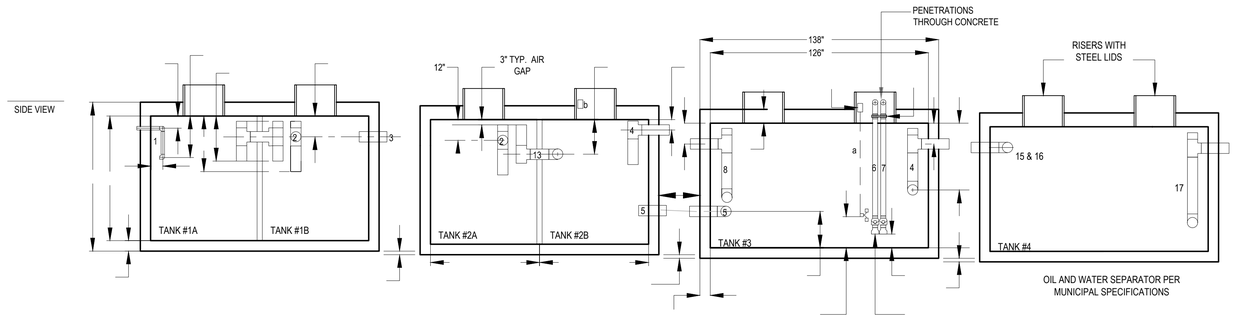
UNDERGROUND ELECTRICAL

A - 1" PVC CONDUIT - LOW WATER PROTECTION FLOAT SWITCH (FS-2) - TANK 3 TO MECHANICAL ROOM
B - 1" PVC CONDUIT - FOR FUTURE USE - TANK 2B TO MECHANICAL ROOM

ABOVE GROUND ELECTRICAL

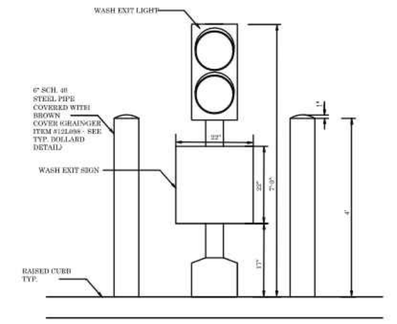
C - 3 PHASE POWER IN L1-L2-L3
D - 120 VAC CONTROL CIRCUIT FEED

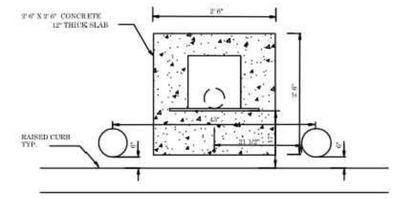
(IF FOOT VALVE IS RAISED, THE FLOAT SWITCH ALSO NEEDS TO BE RAISED)
KEEP A 10" DISTANCE BETWEEN THEM!



TIDAL WAVE WATER RECLAIM SYSTEM DETAIL

N.T.S.





TIDAL WAVE EXIT LIGHT DETAIL

N.T.S.

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PLANNED UNIT DEVELOPMENT PLANS

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TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

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3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212
Phone: (724) 638-8500
www.BohlerEngineering.com

STATE OF OHIO
MICHAEL
KARAS
REGISTERED LANDSCAPE ARCHITECT

SHEET TITLE:

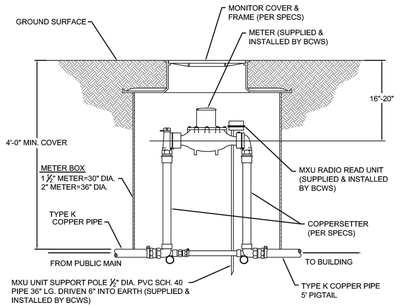
DETAILS

SHEET NUMBER:

C-903

REVISION 8 - 06/21/2023

R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-CNDS-8B-----LAYOUT: C-903 DETAILS
CP



METER TYPE	LAYING LENGTH
1 ½" C2 OMNI	13"
1 ½" T2 OMNI	13"
2" C2 OMNI AS SUPPLIED BY BUTLER COUNTY SEE NOTE 3	17"
2" C2 OMNI FACTORY ORDERED	15 ½"
2" T2 OMNI	17"

NOTE:
1) FOR METERS 3" AND LARGER, REFER TO THE STD. INSTALLATION FOR 3" AND LARGER WATER METERS.

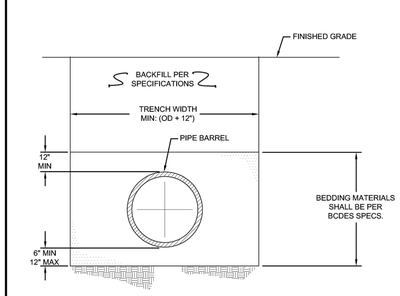
2) ALL DOMESTIC WATER METERS SHALL BE SENSUS OMNI C2 TYPES FOR SIZES OF 1 1/2" AND LARGER. NON-DOMESTIC , (IE. DEDUCT, IRRIGATION), MAY BE EITHER SENSUS OMNI T2 OR C2 TYPES FOR SIZES OF 1 1/2" AND LARGER.

3) BUTLER COUNTY ORDERS 2" C2 OMNI METERS WITH A 17" LAYING LENGTH TO ACCOMODATE THE STANDARD COPPERSETTER. IF THE FACTORY ORDERED SIZE IS UTILIZED AN ADAPTER FLANGE PLATE WILL BE REQUIRED.

STANDARD INSTALLATION FOR 1-1/2" & 2" WATER METER SETTINGS

BUTLER COUNTY WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

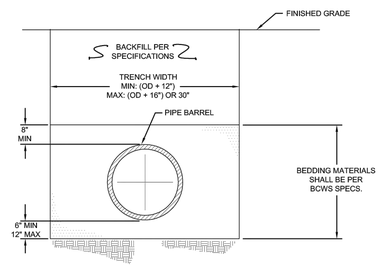
5170



TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION

BUTLER COUNTY WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

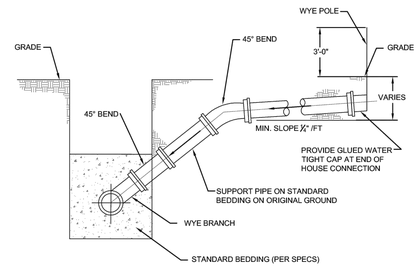
5280



TYPICAL TRENCH DETAIL SEWER INSTALLATION

BUTLER COUNTY WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

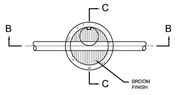
6270



HOUSE CONNECTION FOR DEEP SEWER

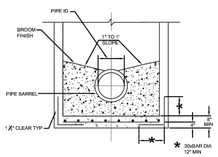
BUTLER COUNTY WATER AND SEWER\
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

6280

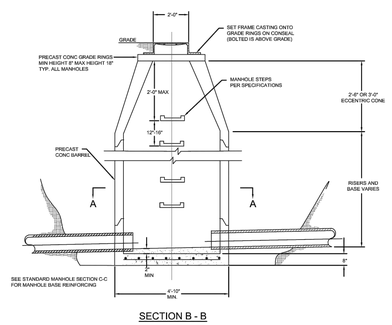


SECTION A - A

M.H. DEPTH	SLAB & DOWELL WEIRTE.S. SQ. IN./ LIN. FT.
0'-10'	0.17
11'-30'	0.20
31'-30'	0.27
31'-40'	0.32



SECTION C - C

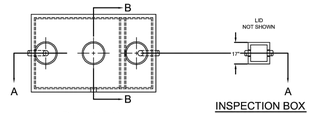


SECTION B - B

BUTLER COUNTY WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

6200

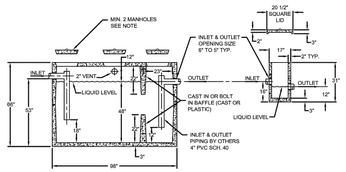
STANDARD MANHOLE



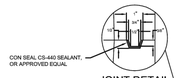
PLAN VIEW

INSPECTION BOX (OPTIONAL)

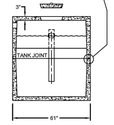
NOTE:
ACCESS MANHOLES WITH A MINIMUM DIAMETER OF 24" SHALL BE PROVIDED OVER EACH GREASE INTERCEPTOR CHAMBER. THE ACCESS MANHOLE SHALL EXTEND AT LEAST TO FINISHED GRADE AND BE DESIGNED AND MAINTAINED TO PREVENT WATER INFLOW OR INFILTRATION. THE MANHOLES SHALL HAVE READILY REMOVABLE COVERS TO FACILITATE INSPECTION, GREASE REMOVAL, AND WASTEWATER SAMPLING ACTIVITIES.



SECTION A-A



JOINT DETAIL

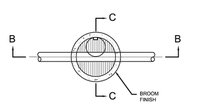


SECTION B-B

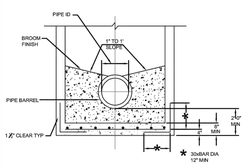
BUTLER COUNTY WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

6310

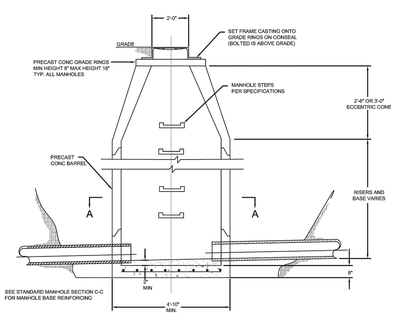
GREASE INTERCEPTOR 1,000 GALLON CAPACITY W/ OPTIONAL INSPECTION BOX



SECTION A - A



SECTION C - C



SECTION B - B

BUTLER COUNTY WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3066
FAX: 513-887-3777

6110

STANDARD CONTROL MANHOLE

R:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-CNDS-SB-----LAYOUT: C-904 BCWS DETAILS

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
INDUSTRIAL DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES
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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	08/05/2022	PER CLIENT COMMENTS	CCP / KJB
2	08/25/2022	PER CLIENT COMMENTS	CCP / KJB
3	11/30/2022	PER ARCH REVISIONS	CCP / KJB
4	02/07/2023	PER ARCH REVISIONS	CCP / KJB
5	04/07/2023	PER TOWNSHIP COMMENTS	CCP / LRB
6	05/22/2023	PER CLIENT COMMENTS	CCP / LRB
7	05/30/2023	PER CLIENT COMMENTS	CCP / LRB
8	06/21/2023	PER COUNTY COMMENTS	CCP / LRB

811
Know what's below. Call before you dig.
ALWAYS CALL 811
It's fast. It's free. It's the law.

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAD220070.00
DRAWN BY: CCP
CHECKED BY: KJB
DATE: 07/29/2022
CAD I.D.: PAD220070.00-CNDS-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

BOHLER
1 ALLEGHENY SQUARE, SUITE 402
PITTSBURGH, PA 15212
Phone: (724) 638-8500
www.BohlerEngineering.com

STATE OF OHIO
MICHAEL
KAHN
REGISTERED LANDSCAPE ARCHITECT
LA.2101558

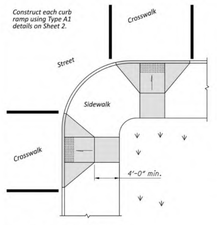
SHEET TITLE:

BUTLER COUNTY WATER & SEWER DETAILS

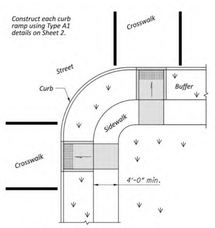
SHEET NUMBER:

C-904

REVISION 8 - 06/21/2023

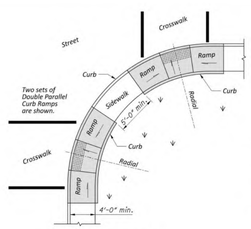


Use curb ramps with flared sides at locations with wide sidewalks.



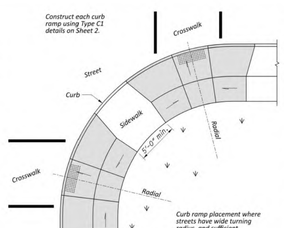
Use curb ramps with returned curbs where buffer is wide enough to accommodate ramp slope.

PERPENDICULAR CURB RAMPS



Place on streets having wide turning radius and where sidewalks are narrow.

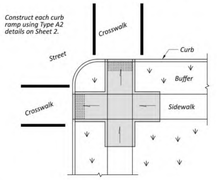
PARALLEL CURB RAMPS



Curb ramp placement where streets have wide turning radius, and sufficient sidewalks width.

COMBINATION CURB RAMPS

PREFERRED CONSTRUCTION PLACEMENT



NOTES

GENERAL: *This drawing shows curb ramp types details and placement examples for curb ramp construction, including the installation of detectable warnings.*

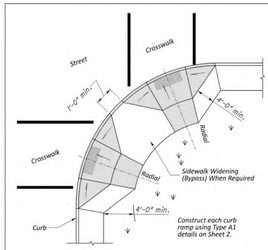
Curb ramp types are shown on Sheet 2 and include Perpendicular, Parallel, and Combined types as specified to be constructed in the locations shown on the project plans.

Curb ramps added to an existing intersection or walk should be individually detailed on the project plans to assure that the design is appropriate for site constraints and all items can be constructed to ADA standards. The contractor may adjust the placement of curb ramps if existing field conditions warrant with the approval of the Engineer.

PAYMENT: *Measure and pay for the ramp area within the shaded limits of this drawing as Item 608 Curb Ramp, Square Foot. This includes the cost of any curb or curb and gutter, detectable warnings, landing areas and any additional materials, installation, grading, forming, and finishing required within the shaded area.*

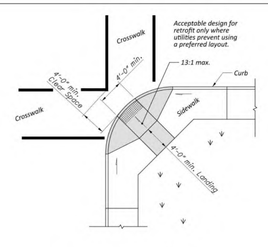
Work beyond the shaded ramp/landing area is paid for as curb (609) and walk (608). Removal of existing curb, walk (or existing curb ramps) are paid under Item 202.

For at-grade crossing locations where only detectable warnings are required in order to acheive ADA compliance, measure and pay for the strip of detectable warnings as Item 608 Detectable Warning, Square Foot. The work to cast the tiles in place will also require removal of existing pavement (Item 202) to the nearest joint, or if no joint exists, a minimum of 4 feet.



Acceptable design on corners with wide turning radius where user is able to maneuver within crosswalk limits so as not to encroach into adjacent traveled lanes.

PERPENDICULAR RAMPS



Use this design only for existing walks, and when site constraints prohibit other designs. The diagonal Type D ramp may be constructed as either a Perpendicular, Parallel or Combination curb ramp type. Avoid using where curb radii are less than 20'-0" .

DIAGONAL RAMP (Type D)

ACCEPTABLE CONSTRUCTION PLACEMENT

OFFICE OF ROADWAY ENGINEERING

REVISIONS

01-21-2022
01-20-2023

STATE ENGINEER
D. Fisher

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Adam Koenig

STANDARD ROADWAY CONSTRUCTION DRAWING
NEW CURB RAMPS
(with Detectable Warnings)

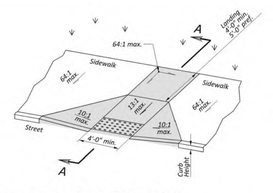
DESIGN AGENCY

SCD NUMBER
BP-7.1

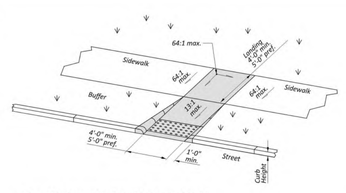
SHEET P.1 | TOTAL 3

THIS DRAWING REPLACES BP-7.1 DATED 01-21-2022.

BP-7.1



Type A1 (Perpendicular with flared sides)



Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

NOTES CONTINUED

The running slope of the curb ramp shall be a 13:1 maximum or flatter. In existing sidewalks, where the maximum ramp slope is not feasible due to site constraints (e.g. utility poles or vaults, right-of-way limits) it may be reduced as follows:

A) 10:1 for a max. rise of 6".
B) 8:1 for a max. rise of 3".
C) 6:1 over a max. run of 2'-0" for historic areas where a flatter slope is not feasible.

To prevent chasing the grade indefinately, the transition from exisiting sidewalk to the shaded curb ramp area is not required to exceed 15 feet in length.

While ramps may be skewed to the crosswalk, the entire lower landing area must fall within the cross walk that the ramp serves and cannot be located in the traveled lane of opposing traffic.

The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transitions shall be 20:1 or flatter.

The bottom edge of the ramp shall change planes perpendicular to the landing.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

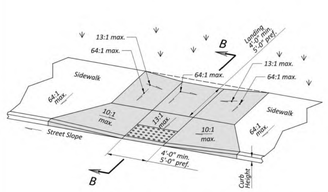
Ramp landings shall be 4' min. x 4' min. with a 64:1 or flatter cross slope and running slope.

DETECTABLE WARNINGS: *Install Detectable Warnings on each curb ramp with approved materials, as shown on Sheet 3. Install these proprietary products as per manufacturer's written instructions.*

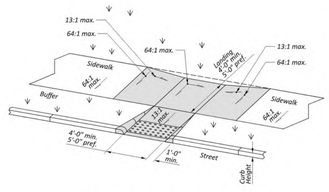
DRAINAGE: *Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding ¼" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed.*

SURFACE TEXTURE: *Texture concrete surfaces by coarse brooming transverse to the ramp slopes to be rougher than the adjacent walk.*

JOINTS: *Provide expansion joints in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. Provide a ½" Item 705.03 expansion joint filler around the edge of ramps built in existing concrete walks. Lines shown on this drawing indicate the ramp edges and slope changes, and do not necessarily indicate joint lines.*

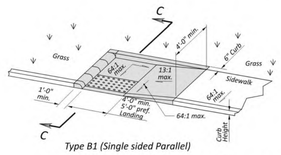


Type C1 (Combined with flared sides)

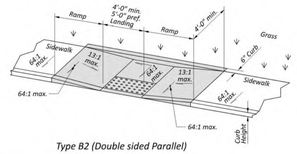


Type C2 (Combined with returned curb)

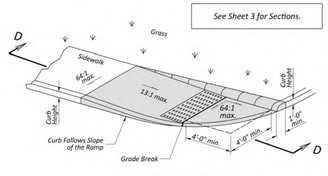
COMBINED CURB RAMP DETAILS



Type B1 (Single sided Parallel)



Type B2 (Double sided Parallel)



Type B3 (Single sided Parallel)

PARALLEL CURB RAMP DETAILS

OFFICE OF ROADWAY ENGINEERING

REVISIONS

01-21-2022
01-20-2023

STATE ENGINEER
D. Fisher

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Adam Koenig

STANDARD ROADWAY CONSTRUCTION DRAWING
NEW CURB RAMPS
(with Detectable Warnings)

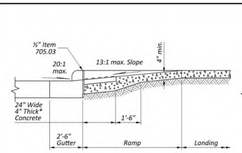
DESIGN AGENCY

SCD NUMBER
BP-7.1

SHEET P.2 | TOTAL 3

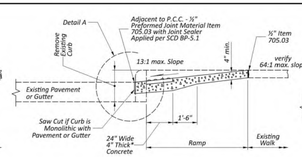
THIS DRAWING REPLACES BP-7.1 DATED 01-21-2022.

BP-7.1

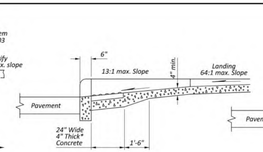


New gutter shown.

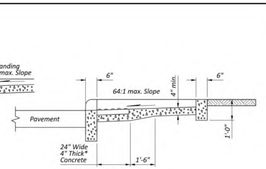
SECTION A-A
NORMAL DETAIL
See Sheet 2.



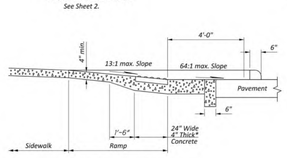
SECTION A-A
EXISTING WALK DETAIL
See Sheet 2.



SECTION B-B
See Sheet 2.

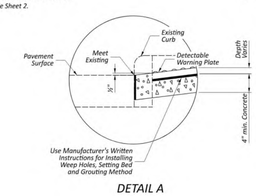


SECTION C-C
See Sheet 2.

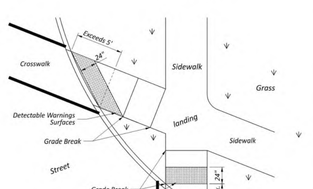


SECTION D-D
See Sheet 2.

**Where possible, pour ramp area integral with the curb, otherwise use 6" thick walk.*



DETAIL A



DETECTABLE WARNING ALIGNMENT
FOR DIRECTIONAL CURB RAMPS

DETECTABLE WARNINGS NOTES

GENERAL: *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.*

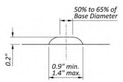
PLACEMENT: *Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. Typical street corner placement locations are shown on Sheet 1.*

Some detectable warning products require a concrete border for proper installation. The concrete border should not exceed 2". Where the back of curb edge is tooled to provide a radius, the border dimension should be measured from the end of the radius.

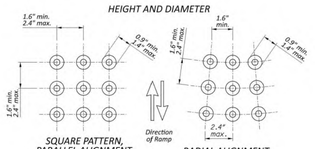
The depth of concrete underneath detectable warning products shall be a minimum of 4". See DETAIL A.

ALIGNMENT: *Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but for skewed conditions see DETECTABLE WARNING ALIGNMENT Detail. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.*

PRODUCTS & COLORS: *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 Office of Roadway Engineering Service's Detectable Warnings Approved List. Install products as per manufacturer's printed instructions.*



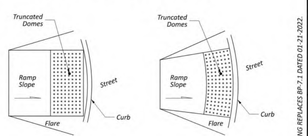
HEIGHT AND DIAMETER



SQUARE PATTERN,
PARALLEL ALIGNMENT

RADIAL ALIGNMENT

TRUNCATED DOMES DETAILS



DOME ALIGNMENT ON RADIUSED CURB

OFFICE OF ROADWAY ENGINEERING

REVISIONS

01-21-2022
01-20-2023

STATE ENGINEER
D. Fisher

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Adam Koenig

STANDARD ROADWAY CONSTRUCTION DRAWING
NEW CURB RAMPS
(with Detectable Warnings)

DESIGN AGENCY

SCD NUMBER
BP-7.1

SHEET P.3 | TOTAL 3

THIS DRAWING REPLACES BP-7.1 DATED 01-21-2022.

BP-7.1

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABILITY ASSESSMENT
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	08/05/2022	PER CLIENT COMMENTS	CCP / KJB
2	08/25/2022	PER CLIENT COMMENTS	CCP / KJB
3	11/30/2022	PER ARCH REVISIONS	CCP / KJB
4	02/07/2023	PER ARCH REVISIONS	CCP / KJB
5	04/07/2023	PER TOWNSHIP COMMENTS	CCP / LRB
6	05/22/2023	PER CLIENT COMMENTS	CCP / LRB
7	05/30/2023	PER CLIENT COMMENTS	CCP / LRB
8	06/21/2023	PER COUNTY COMMENTS	CCP / LRB

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PROJECT No.:	PAD220070.00
DRAWN BY:	CCP
CHECKED BY:	KJB
DATE:	07/29/2022
CAD I.D.:	PAD220070.00-CNDS-8B

PROJECT:

PLANNED UNIT DEVELOPMENT PLANS

FOR

TIDAL WAVE AUTO SPA

PROPOSED CAR WASH

SITE #054
3003 BRIDGEWATER LANDING DRIVE
FAIRFIELD TOWNSHIP
BUTLER COUNTY, OHIO
T.M.P.#: A0300172000005

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NEW JERSEY 21AS00100700

SHEET TITLE:

ODOT CURB RAMP DETAILS

SHEET NUMBER:

C-905

REVISION 8 - 06/21/2023

PLOTTED: 6/21/2023 8:02:40 AM BY: CPeterson
FILE NAME: P:\2022\PAD220070.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\PAD220070.00-CNDS-8B ——— LAYOUT: C-905 ODOT DETAILS