

# GRADING & UTILITY NOTES

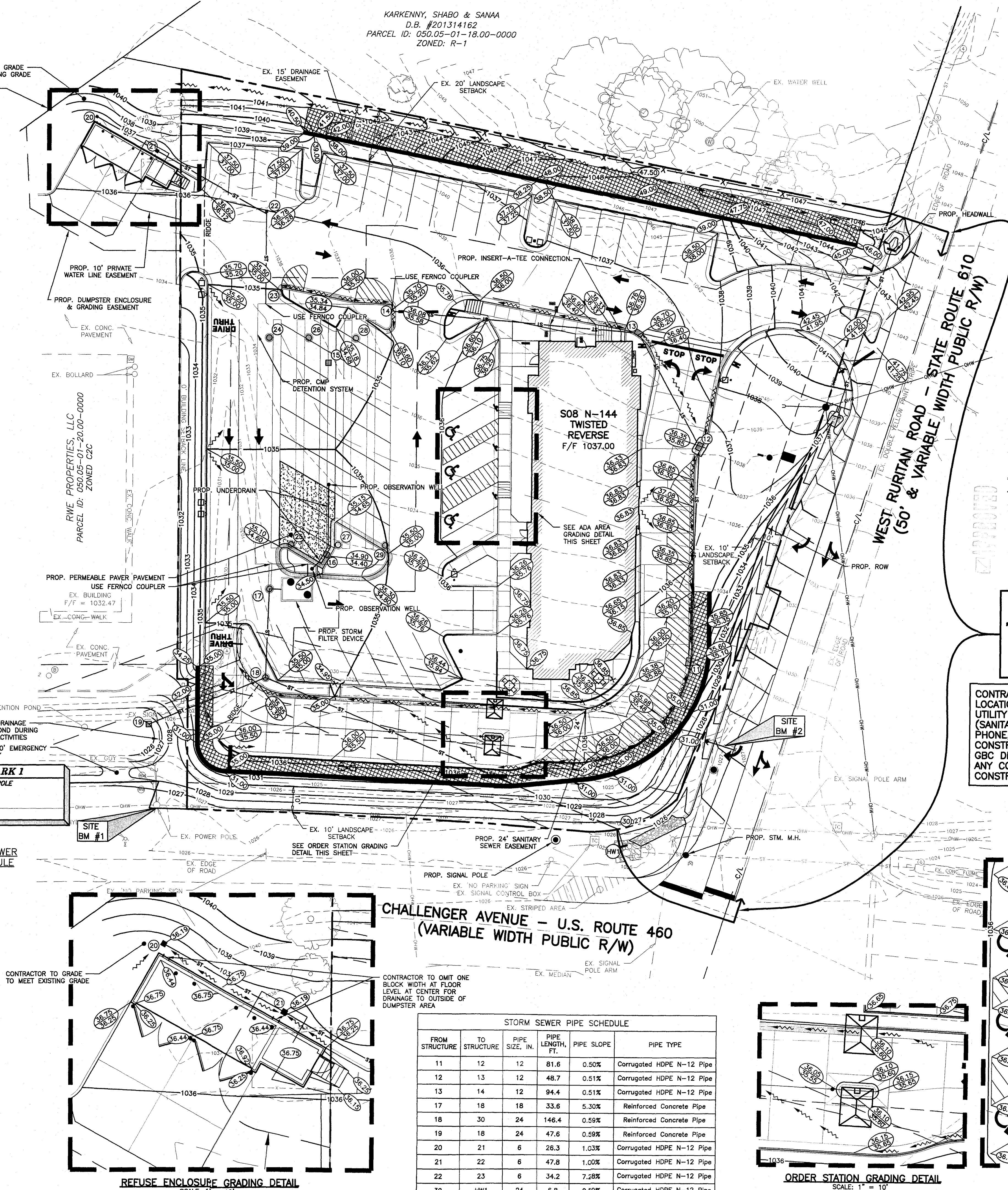
- LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. ALL PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL UTILITIES AND SERVICES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL NOTE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
- DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
- THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY REMOVAL AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS/DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME.
- WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS SHALL BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTOR'S PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE.
- ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. SUBBASE MATERIAL FOR SIDEWALKS, CURBS, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER OR OWNER'S REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT.
- ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
- THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
- PAVEMENT SHALL BE SAW CUT IN STRAIGHT LINES TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS SHALL BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
- THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS SHALL BE ADJUSTED, IF REQUIRED, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE SLOPE ALONG ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
- PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MINIMUM OF 0.75% GUTTER GRADE ALONG CURB FACE. ENGINEER TO APPROVE FINAL CURBING OUT SHEETS PRIOR TO INSTALLATION.
- IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
- CONTRACTOR SHALL BE REQUIRED TO SECURE ALL NECESSARY PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR SHALL SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING WORK.

STRUCTURE	TOP	INVERT	SIZE	TYPE
11	1035.10	1032.10	12" NW	PROP. CURB INLET*1
12	1035.85	1031.69 1031.59	12" SE 12" W	PROP. CURB INLET*1
13	1036.20	1031.34 1031.24	12" E 12" SW	PROP. CURB INLET*1
14		1030.78	12" NE	PROP. 12" STUB - USE FERNOCO COUPLER
15	1034.40	1026.25	15" SE	PROP. CATCH BASIN TYPE 1*1
16	1034.40	1026.25	15" NE	PROP. CATCH BASIN TYPE 1*1
17	1035.00	SEE DETAIL C-3.12		PROP. OUTLET CONTROL STRUCTURE 1
18	1035.75	1024.47 1024.47 1024.37	24" S 18" NW 24"	PROP. STM. M.H. 1
19	1027.00	1024.75	24" N	PROP. OUTLET CONTROL STRUCTURE 1
20	1036.19	1034.69	6" NE	PROP. YARD DRAIN
21	1036.19	1034.42 1034.32	6" SW 6" NE	PROP. YARD DRAIN
22	1036.00	1033.84 1033.74	6" SW 6" SE	PROP. CLEANOUT
23	1032.09	1031.25	6" NW	PROP. 6" STUB - USE FERNOCO COUPLER
24	1034.68	1027.25		PROP. ACCESS LOCATION
25	1035.00	1027.25		PROP. ACCESS LOCATION
26	1034.70	1027.25		PROP. ACCESS LOCATION
27	1035.00	1027.25		PROP. ACCESS LOCATION
28	1034.87	1027.25		PROP. ACCESS LOCATION
29	1035.00	1027.25		PROP. ACCESS LOCATION
30	1026.07	1023.51 1023.41	24" SW 24" E	PROP. STM. M.H. 1
HW1		1023.37	24" W	PROP. HEADWALL (101.01)

\* - WITH GRATE INLET SKIMMER FOR WATER QUALITY.  
1 - SHALL HAVE INLET SHAPING PER VDOT IS-1. SEE SHEET C-3.7

## EXISTING STORM SEWER STRUCTURE SCHEDULE

- EX. END OF PIPE INV. 1047.48, 15" NW
- EX. END OF PIPE INV. 1049.02, 15" SE
- EX. END OF PIPE INV. 1023.29, 18" NE
- EX. END OF PIPE INV. 1022.59, 18" SW



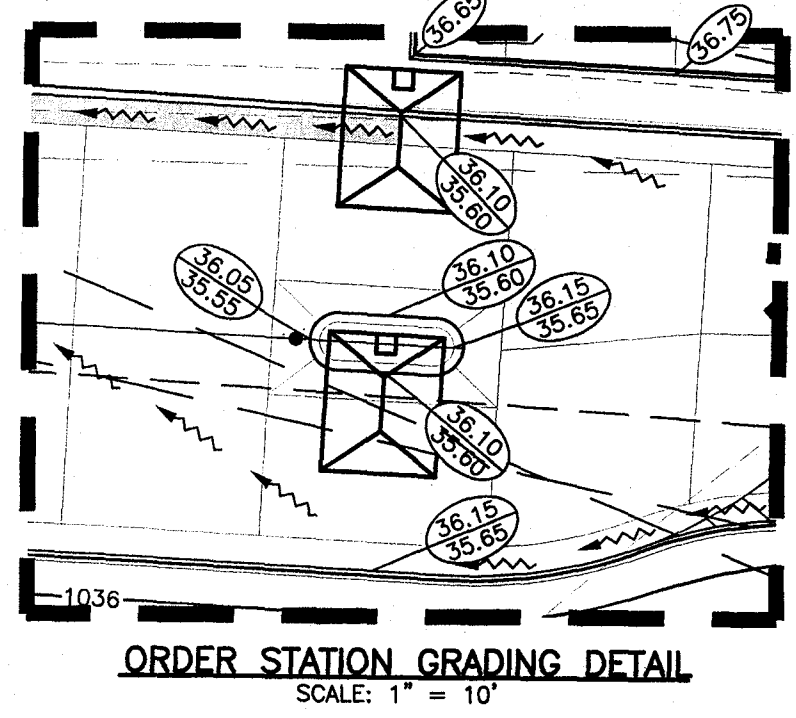
**SITE BENCH MARK 1**  
LARGE NAIL IN POWER POLE  
ELEVATION = 1026.55

**SITE BENCH MARK 2**  
TOP OF FIRE HYDRANT  
ELEVATION = 1029.83

**REFUSE ENCLOSURE GRADING DETAIL**  
SCALE: 1" = 10'

CONTRACTOR TO OMIT ONE BLOCK WIDTH AT FLOOR LEVEL AT CENTER FOR DRAINAGE TO OUTSIDE OF DUMPSTER AREA

FROM STRUCTURE	TO STRUCTURE	PIPE SIZE, IN.	PIPE LENGTH, FT.	PIPE SLOPE	PIPE TYPE
11	12	12	81.6	0.50%	Corrugated HDPE N-12 Pipe
12	13	12	48.7	0.51%	Corrugated HDPE N-12 Pipe
13	14	12	94.4	0.51%	Corrugated HDPE N-12 Pipe
17	18	18	33.6	5.30%	Reinforced Concrete Pipe
18	30	24	146.4	0.59%	Reinforced Concrete Pipe
19	18	24	47.6	0.59%	Reinforced Concrete Pipe
20	21	6	28.3	1.03%	Corrugated HDPE N-12 Pipe
21	22	6	47.8	1.00%	Corrugated HDPE N-12 Pipe
22	23	6	34.2	7.28%	Corrugated HDPE N-12 Pipe
30	HW1	24	6.8	0.59%	Corrugated HDPE N-12 Pipe



**ADA AREA GRADING DETAIL**  
SCALE: 1" = 10'

FOR RIGHT-OF-WAY IMPROVEMENTS, SEE "CHICK-FIL-A VDOT RIGHT OF WAY IMPROVEMENTS" PLANS PREPARED BY MATTERN AND CRAIG

CONTRACTOR RESPONSIBLE TO FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITY TIE-INS AS SHOWN ON SITE PLANS (SANITARY, STORM, WATER, GAS, ELECTRIC, PHONE, ETC.) PRIOR TO THE START OF CONSTRUCTION. CONTACT ALLAN WILEY AT GBC DESIGN, INC., 330-836-0228, WITH ANY CONCERNS PRIOR TO THE START OF CONSTRUCTION.

SEE STORM SEWER PROFILES ON SHEET C-3.9

- LEGEND**
- EX. FIRE HYDRANT
  - PROP. VALVE
  - EX. VALVE
  - PROP. MANHOLE
  - EX. STORM MANHOLE
  - EX. SANITARY MANHOLE
  - PROP. INLET
  - EX. CURB INLET
  - EX. TREE
  - EX. POWER POLE
  - EX. LIGHT POLE
  - EX. GRADE
  - PROP. TOP OF CURB ELEV.
  - PROP. BOTTOM OF CURB ELEV.
  - PROP. FINISHED ELEVATION
  - SPILLING SECTION
  - CATCHING SECTION
  - POSITIVE DRAINAGE
  - EX. STORM SEWER
  - PROP. STORM SEWER
  - PROP. FENCE
  - EX. CURB
  - PROP. CURB
  - PROP. CONTOURS
  - EX. CONTOURS
  - PROP. LIMITS OF GEOGRID REINFORCEMENT

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

REVISION

NO.	DATE	BY	DESCRIPTION
1	6/6/2014	ABC	PER PLANNING COMMISSION
2	6/17/2014	ABC	PER PLANNING COMMISSION
3	10/17/2014	ABC	PER PLANNING COMMISSION
4	12/17/2014	ABC	FOR CONSTRUCTION

COMMONWEALTH OF VIRGINIA

JOHN E. WALSH  
Lic. No. 0402 044141  
PROFESSIONAL ENGINEER

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Alton, OH 44320-1128  
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STORE #3375  
Challenger Avenue  
S08 N-144-R Twisted  
Purchase Parcel

3814 Challenger  
Avenue NE  
Roanoke, VA 24012

SHEET TITLE  
**GRADING  
PLAN**

DWG EDITION V8.5  
REVISION 1-2014

Job No. : 46189D  
Store : 3375  
Date : 8/25/14  
Drawn By : B.A.W.  
Checked By: A.S.W.  
Sheet

**C-3.0**