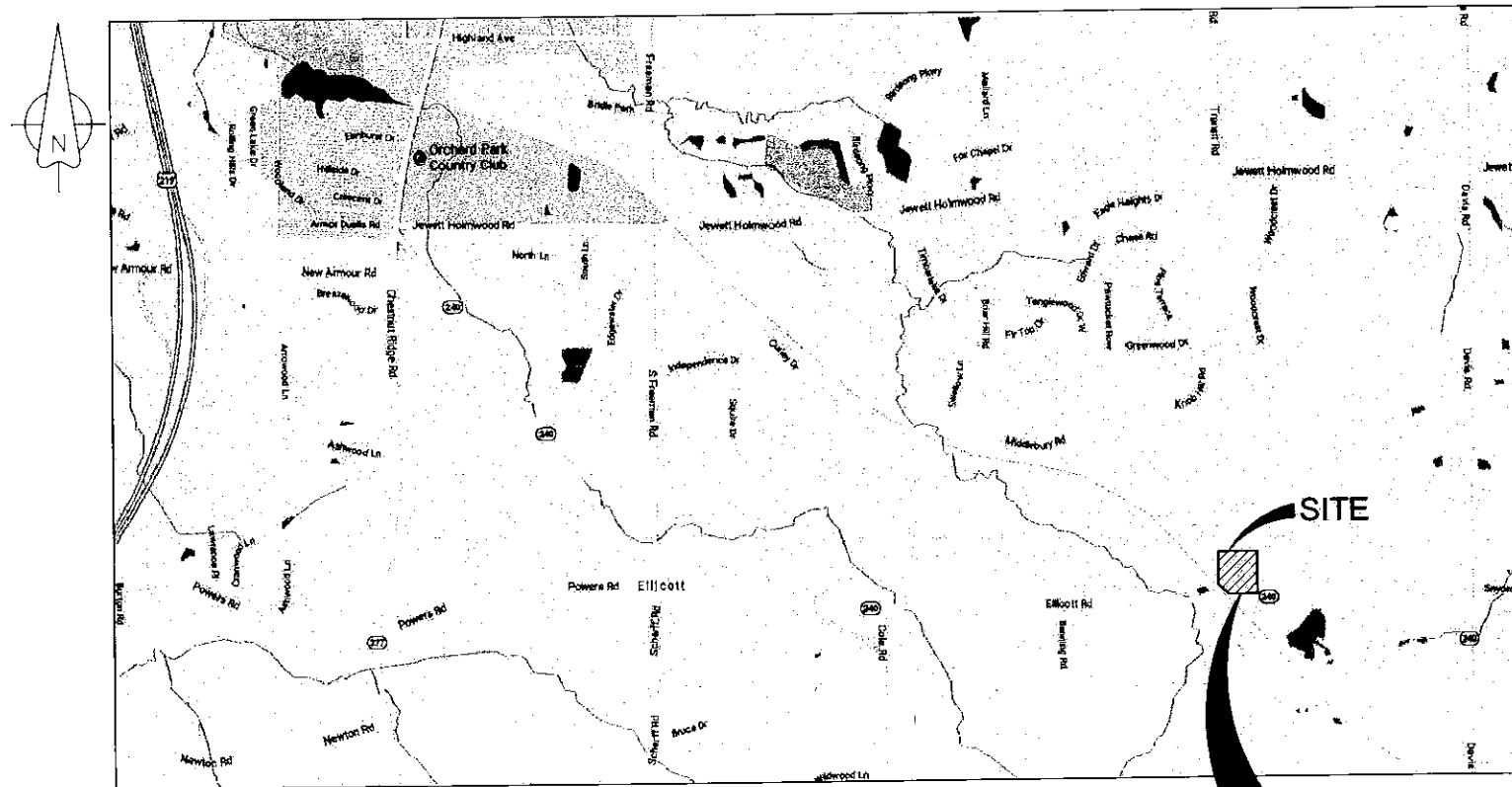


# FIVE STAR EQUIPMENT PROPOSED BUILDING AND SITE IMPROVEMENTS

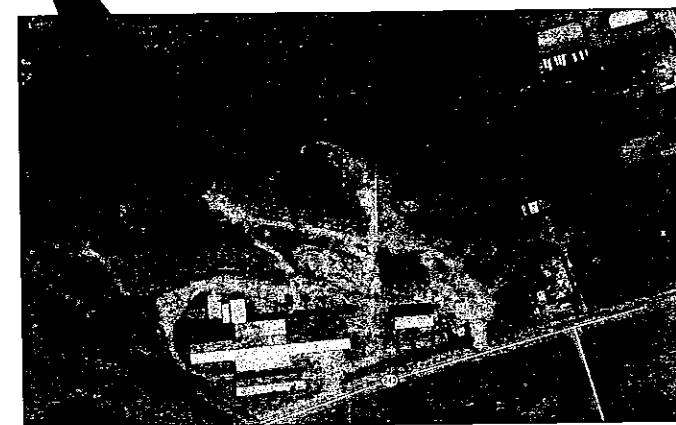
280 ELLICOTT ROAD  
TOWN OF AURORA, ERIE COUNTY  
STATE OF NEW YORK  
AUGUST, 2017



LOCATION MAP

| LIST OF DRAWINGS |                                      |
|------------------|--------------------------------------|
| DWG              | TITLE                                |
| G-100            | COVER SHEET                          |
| C-101            | EXISTING CONDITIONS PLAN             |
| C-102            | DEMOLITION PLAN                      |
| C-103            | SITE PLAN LAYOUT                     |
| C-104            | GRADING AND PAVING PLAN              |
| C-105            | UTILITY PLAN                         |
| C-106            | SITE DETAILS 1                       |
| C-107            | SITE DETAILS 2                       |
| C-108            | BIO-RETENTION BASIN AND DETAILS      |
| C-109            | EROSION AND SEDIMENT CONTROL PLAN    |
| C-110            | EROSION AND SEDIMENT CONTROL DETAILS |
| C-111            | SEPTIC SYSTEM SITE PLAN AND NOTES    |
| C-112            | SEPTIC SYSTEM DETAILS 1              |
| C-113            | SEPTIC SYSTEM DETAILS 2              |
| C-114            | LANDSCAPE PLAN                       |

*Nussbaumer  
& Clarke, Inc.*  
ENGINEERS AND SURVEYORS  
3556 LAKE SHORE ROAD  
BUFFALO, NY 14219-1494  
(716) 827-8000 PHONE  
(716) 826-7958 FAX



NOT FOR CONSTRUCTION  
AGENCY REVIEW  
08-18-17

NUSSBAUMER & CLARKE, INC.  
A CORPORATION REGISTERED TO PRACTICE  
PROFESSIONAL ENGINEERING & LAND SURVEYING  
IN THE STATE OF NEW YORK  
CERTIFICATE NO. \_\_\_\_\_



**Nussbaumer & Clarke, Inc.**  
 3656 Lake Shore Road, Suite 500 | Buffalo, NY 14219  
 (716) 827-8000 | (716) 828-7958 fax  
 www.nussbaumer.com  
 Erie | Niagara | Chautauque | Cattaraugus

**REGULATORY REVIEW  
 NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
 BUILDING AND SITE IMPROVEMENTS**  
 280 ELLICOTT ROAD, AURORA NY

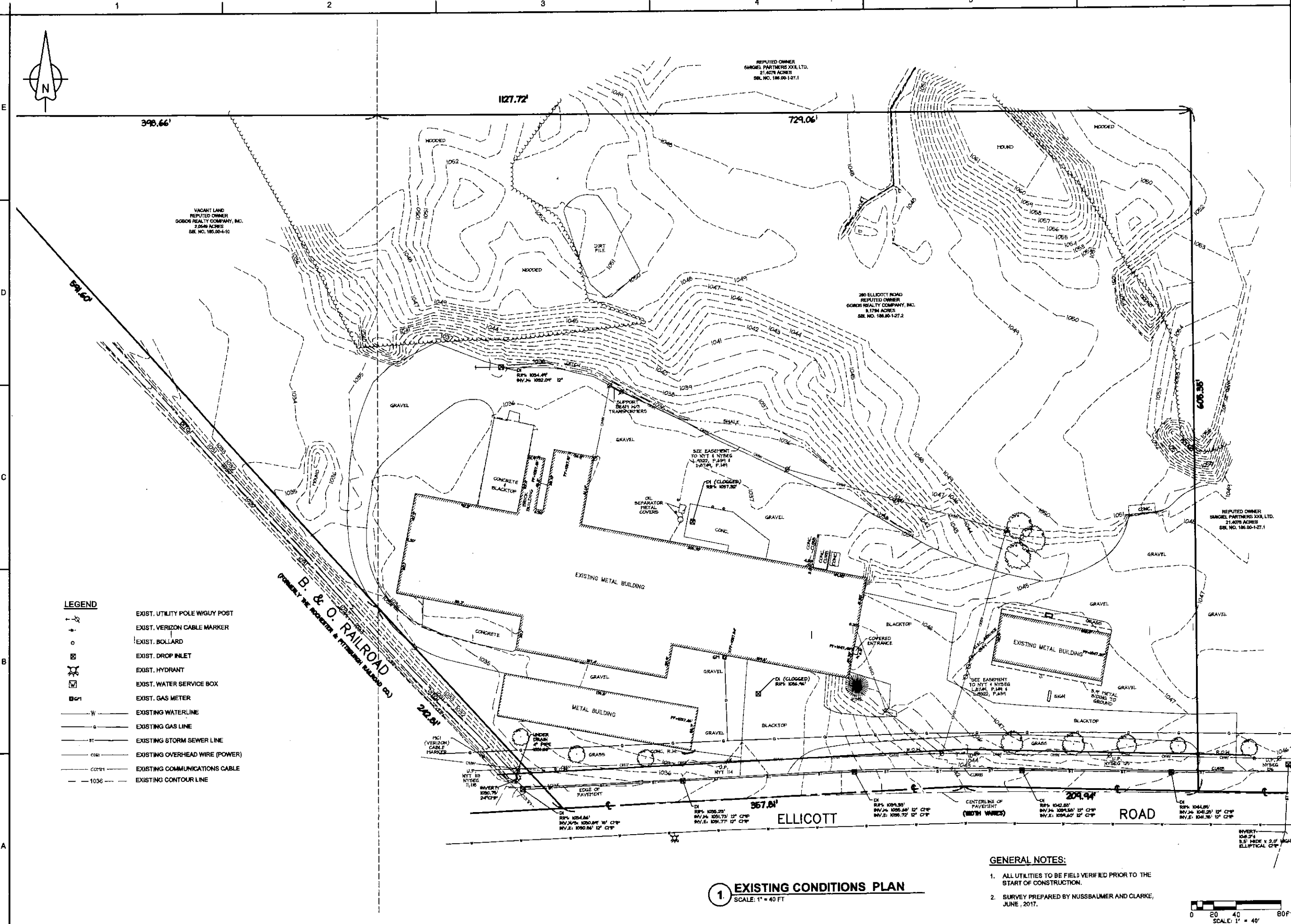
**EXISTING CONDITIONS**

| REVISIONS |             |      |
|-----------|-------------|------|
| NO.       | DESCRIPTION | DATE |
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 EDUCATION LAW

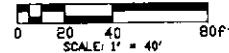
|                |           |
|----------------|-----------|
| PROJECT NUMBER | 17J5-0030 |
| DATE           | 06-18-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
| = 1 INCH       |           |
| SHEET No.      | 2 OF 15   |
| <b>C-101</b>   |           |



- LEGEND**
- EXIST. UTILITY POLE W/ GUY POST
  - EXIST. VERIZON CABLE MARKER
  - EXIST. BOLLARD
  - EXIST. DROP INLET
  - EXIST. HYDRANT
  - EXIST. WATER SERVICE BOX
  - EXIST. GAS METER
  - EXISTING WATERLINE
  - EXISTING GAS LINE
  - EXISTING STORM SEWER LINE
  - EXISTING OVERHEAD WIRE (POWER)
  - EXISTING COMMUNICATIONS CABLE
  - EXISTING CONTOUR LINE

**1 EXISTING CONDITIONS PLAN**  
 SCALE: 1" = 40 FT

- GENERAL NOTES:**
- ALL UTILITIES TO BE FIELD VERIFIED PRIOR TO THE START OF CONSTRUCTION.
  - PLAN PREPARED BY NUSSBAUMER AND CLARKE, JUNE, 2017.



H:\new developments\17J5-0030 - five star equipment\working drawings\discipline\C-C-101 grading & drainage plan.dwg 6/18/2017 TBOYLE

**DEMOLITION NOTES**

1. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO PREPARING A BID PROPOSAL IN ORDER TO VERIFY THE LOCATIONS OF EXISTING UTILITIES, THE GRADING OF THE SITE, THE ITEMS TO BE REMOVED WITHIN THE EXISTING BUILDINGS, THE EXISTING WATER, SEWER, GAS, AND ELECTRICAL SERVICES TO BE DISCONNECTED, AND TO BECOME FAMILIAR WITH EXISTING CONDITIONS.
2. THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT ANY PLANTS AND MATERIALS WHICH ARE TO REMAIN IN PLACE OR ARE TO REMAIN THE PROPERTY OF THE OWNER WILL NOT BE DAMAGED. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED PLANTS OR MATERIALS IN A MANNER SATISFACTORY TO THE OWNER, AT THE EXPENSE OF THE CONTRACTOR.
3. AREAS DISTURBED OUTSIDE OF THE WORK LIMITS ARE TO BE RESTORED, AS REQUIRED, TO THE SATISFACTION OF THE OWNER, AT THE EXPENSE OF THE CONTRACTOR.
4. ALL ABANDONED MATERIALS AND ITEMS IN AND AROUND THE BUILDINGS THAT ARE NOT CLAIMED BY THE OWNER SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE A DISPOSAL SITE. ALL COSTS ASSOCIATED WITH DISPOSAL INCLUDING PERMITTING, TRANSPORTATION TO SITE ETC., SHALL BE INCLUDED IN THE BASE BID AMOUNT.
6. ALL WORK ON THIS PROJECT IS TO BE CONDUCTED WITHIN THE PROPERTY BOUNDARY. ANY DAMAGE CREATED BY THE CONTRACTOR OR THE CONTRACTOR'S REPRESENTATIVE OUTSIDE THE PROPERTY BOUNDARY SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT NO ADDITIONAL EXPENSE TO THE OWNER.
7. ALL COSTS ASSOCIATED WITH DISCONNECTION OF GAS, ELECTRICAL, WATER AND SEWER SERVICES TO THE BUILDINGS SHALL BE PAID FOR BY THE CONTRACTOR AND INCLUDED IN THE BASE BID.
8. ALL ELECTRICAL WORK TO BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR.
9. EXISTING WATER SERVICE (3/4" OR 1" - FIELD VERIFY) TO BE REROUTED TO NEW BUILDING PER EDWA REQUIREMENTS.
10. EXISTING UNDERGROUND OIL/WATER SEPARATOR AND ASSOCIATED PIPING TO BE REMOVED AND DISPOSED OF PER NYSDEC HAZARDOUS WASTE DISPOSAL REGULATIONS.
11. THE CONTRACTOR SHALL SECURE ALL WORK AREAS DURING NON-WORK HOURS.
12. EXISTING BOLLARDS TO BE REMOVED.
13. EXISTING GAS LINES FROM DEMOLISHED BUILDINGS TO BE REMOVED AND CRIMPED AT MAIN PER NATIONAL FUEL STANDARDS. CONTRACTOR TO VERIFY LOCATION, NATIONAL FUEL GAS TO COORDINATE NEW GAS LINE LOCATION ALONG PRIVATE ROADWAY.
14. EXISTING DRAINAGE INLET TO BE DEMOLISHED. ASSOCIATED PIPES TO BE ABANDONED IN PLACE AND FILLED WITH FLOWABLE FILL OR REMOVED IF FOUND TO BE IN CONFLICT WITH NEW CONSTRUCTION.
15. EXISTING GRAVEL TREATMENT AREAS TO BE REMOVED AND REPLACED WITH FILL WHERE APPLICABLE AND PROVIDE A MINIMUM OF 3" TOPSOIL AND SEED. SEE LANDSCAPE PLAN FOR MORE DETAILS.
16. EXISTING CONCRETE CURBS TO BE DEMOLISHED.

**DEMOLITION LEGEND**

- EXISTING TREE TO BE REMOVED
- EXISTING OVERHEAD WIRES TO BE REMOVED (BY OTHERS)
- EXISTING UNDERGROUND PIPE TO BE REMOVED
- EXISTING PAVEMENTS TO BE DEMOLISHED
- EXISTING BUILDING TO BE DEMOLISHED

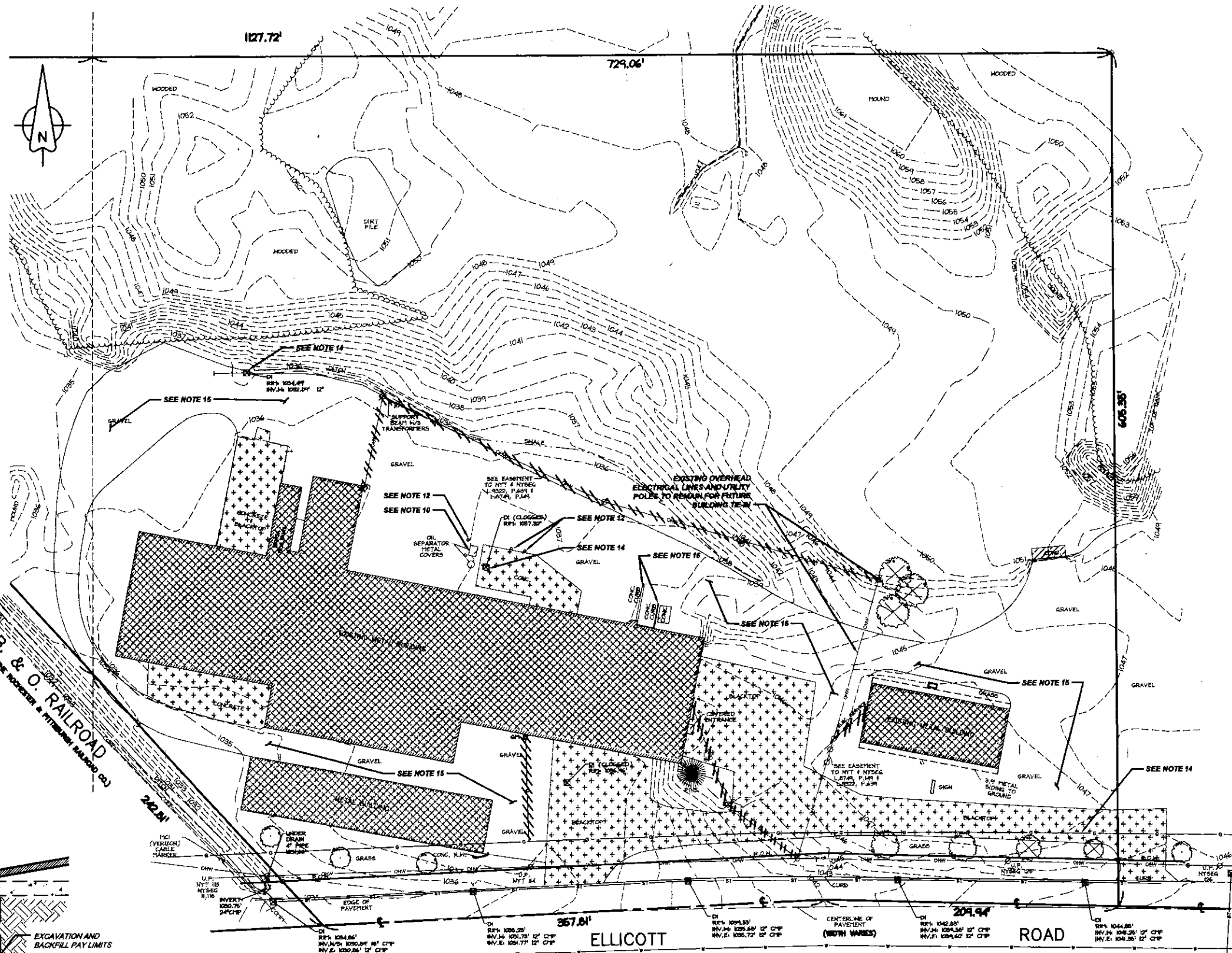
PROPOSED GRADE TO INCLUDE 3" TOPSOIL AND SEEDING, SEE GRADING PLAN

EXISTING GRADE

EXISTING CONCRETE FOUNDATION TO BE REMOVED. FOUNDATION MAY VARY IN SIZE AND DEPTH.

EARTH FILL OR DEMOLISHED CONCRETE, BLOCK, OR BRICK CRUSHED TO MEET GRADATION REQUIREMENTS FOR SELECT GRANULAR FILL

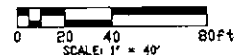
**EXCAVATION AND BACKFILL DETAIL**  
NOT TO SCALE



**1 DEMOLITION PLAN**  
SCALE: 1" = 40 FT

**LEGEND**

- UTILITY POLE W/GUY POST
- VERIZON CABLE MARKER
- BOLLARD
- DROP INLET
- HYDRANT
- WATER SERVICE BOX
- POST
- GAS METER
- EXISTING CONTOUR
- EXISTING SANITARY SEWER
- EXISTING WATERLINE
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING OVERHEAD WIRE (POWER)
- EXISTING COMMUNICATIONS CABLE



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**REGULATORY REVIEW  
NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS**  
280 ELLICOTT ROAD, AURORA NY  
**DEMOLITION PLAN**

| REVISIONS |             |      |
|-----------|-------------|------|
| No.       | DESCRIPTION | DATE |
|           |             |      |
|           |             |      |
|           |             |      |

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EDUCATION LAW.

|                |           |
|----------------|-----------|
| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-18-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    |           |
| SCALE:         | AS NOTED  |
| 1" = 40'       |           |
| SHEET No.      | 3 OF 16   |

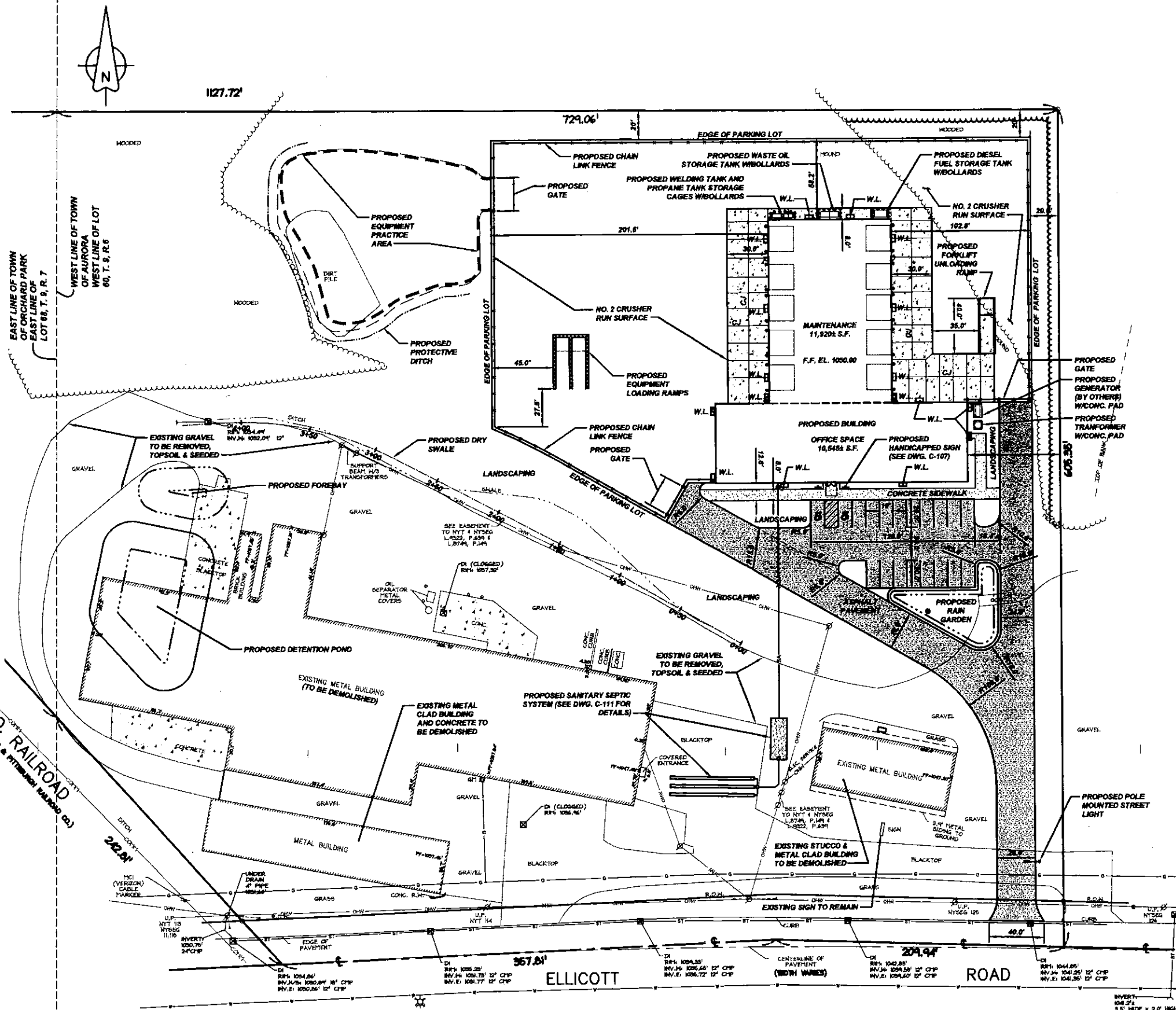
**C-102**

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL COMPLY WITH THE TOWN OF AURORA STANDARD DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE TOWN OF AURORA ENG. DEPT. OF ANY HAZARDOUS SUBSTANCE ENCOUNTERED DURING THE CONSTRUCTION OF THE WORK. HE SHALL AT HIS EXPENSE, CONFORM TO ALL LAWS, RULES, REGULATIONS AND DIRECTIONS AS PROMULGATED BY THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, THE NEW YORK STATE DEPARTMENT OF HEALTH AND ANY SUCH LOCAL RULES, ORDINANCES AND LAWS WHEN ENCOUNTERING OR WORKING WITH ANY SUCH HAZARDOUS SUBSTANCE.
3. THE CONTRACTOR SHALL COMPLY IN ALL RESPECTS TO THE INDUSTRIAL CODE PART (RULE NO.) 63 RELATING TO CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES, AS ISSUED BY THE STATE OF NEW YORK DEPARTMENT OF LABOR, BOARD OF STANDARD AND APPEALS.
4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF THE PIPE LAYING OPERATION, SO THAT, IF MINOR ADJUSTMENTS MUST BE MADE IN ELEVATION AND/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, SAID CHANGES CAN BE MADE IN ADVANCE OF THE WORK.
5. WHERE SUCH FACILITIES ARE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER, HE SHALL CERTIFY TO THE ENGINEERING DEPARTMENT OF THE TOWN OF AURORA THAT SAID FACILITIES AS CONSTRUCTED WERE SUPERVISED BY HIMSELF (HERSELF) AND THAT THE WORKS HAVE BEEN FULLY COMPLETED IN ACCORDANCE WITH THE APPROVED ENGINEERING REPORTS, PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS AND ANY AND ALL ADDENDA TO SAME.
6. THE CONSTRUCTION OF THE FACILITIES SHALL BE UNDER THE SUPERVISION OF A PERSON OR FIRM QUALIFIED TO PRACTICE PROFESSIONAL ENGINEERING IN NEW YORK STATE UNDER THE EDUCATION LAW OF THE STATE, WHENEVER ENGINEERING SERVICES ARE REQUIRED BY SUCH LAW FOR SUCH PURPOSES.
7. UNSUITABLE MATERIALS SUCH AS FROZEN ORGANIC AND/OR VEGETABLE MATERIAL, DEBRIS, TREES, LUMBER, LARGE STONES OR CLODS (6" OR LARGER), MUCK, PEAT, ORGANIC SILT WILL NOT BE ACCEPTABLE FILL AND CERTAIN MAN-MADE DEPOSITS OF INDUSTRIAL WASTE, SLUDGE OR LANDFILL MAY ALSO BE DETERMINED AS UNSUITABLE HAZARDOUS MATERIAL.
8. THE COMPACTION OF ALL MATERIALS WILL OCCUR AT 6" INCREMENTS.
9. VERIFICATION OF ALL EXISTING EASEMENTS IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND THEY MUST BE SHOWN ALONG WITH ALL PROPOSED EASEMENTS ON PLAN DRAWINGS.
10. SHOULD A FLUID CONDITION BE ENCOUNTERED AT THE TRENCH BOTTOM, THE CONTRACTOR IS TO INSTALL ADDITIONAL STONE CRADLE AS ORDERED BY THE ENGINEER.
11. ALL PIPE CROSSING UNDER PAVED AREAS ARE TO BE BACKFILLED TO SUBGRADE WITH COMPACTED SELECT MATERIAL TO FIVE (5) FEET OUTSIDE THE PAVEMENT EDGES.
12. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED TREE EXPERT TO REMOVE, WHERE NECESSARY, BRANCHES WHICH INTERFERE WITH THE CONSTRUCTION OPERATION, OR REPAIR TREES HAVING SUFFERED DAMAGE BY CONSTRUCTION ACTIVITIES. THE COST INVOLVED IN THE ABOVE IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.
13. CAST IN PLACE CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF N.Y.S.D.O.T. STANDARD SPECIFICATION SECTION 601 FOR PORTLAND CEMENT CONCRETE.
14. MANHOLES AND RECEIVERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH N.Y.S.D.O.T. STANDARD SPECIFICATION 604.

**LEGEND**

- EXIST. UTILITY POLE WIGUP POST
- EXIST. VERIZON CABLE MARKER
- EXIST. BOLLARD
- EXIST. DROP INLET
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED PIPE (SELECT FILL REQUIRED)
- EXISTING WATERLINE
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING OVERHEAD WIRE (POWER)
- EXISTING COMMUNICATIONS CABLE
- PROPOSED HEAVY DUTY ASPHALT AREA
- PROPOSED REGULAR DUTY ASPHALT AREA
- PROPOSED WALL LIGHT (BY OTHERS)

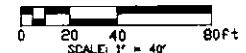


**1 SITE PLAN LAYOUT**  
SCALE: 1" = 40 FT

**SITE INFORMATION:**  
AREA: 9.18± ACRES  
ZONING: \*I1 INDUSTRIAL  
YARDS:  
FRONT: 75'  
SIDE: 20'  
REAR: 20'

PROPOSED BUILDING: 22,465 SQFT  
PROPOSED PAVEMENT AREA: 2.31 ACRES  
PROPOSED PARKING SPACES: 19 REGULAR SPA (2 HC ACCESSIBLE)  
EXIST. BUILDINGS: 40,100± S.F.  
EXIST. PAVEMENT (GRAVEL & ASPHALT): 1.4± ACRES

**APPLICANT:**  
FIVE STAR EQUIPMENT  
280 ELLICOTT ROAD  
AURORA, NEW YORK 14057  
(716)662-2181



**Nussbaumer & Clarke, Inc.**  
3656 Lake Shore Road, Suite 300 | Buffalo, NY 14219  
(716) 827-8000 | (716) 825-7855 fax  
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**REGULATORY REVIEW  
NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS**  
280 ELLICOTT ROAD, AURORA NY  
**SITE PLAN LAYOUT**

| REVISIONS |             |      |
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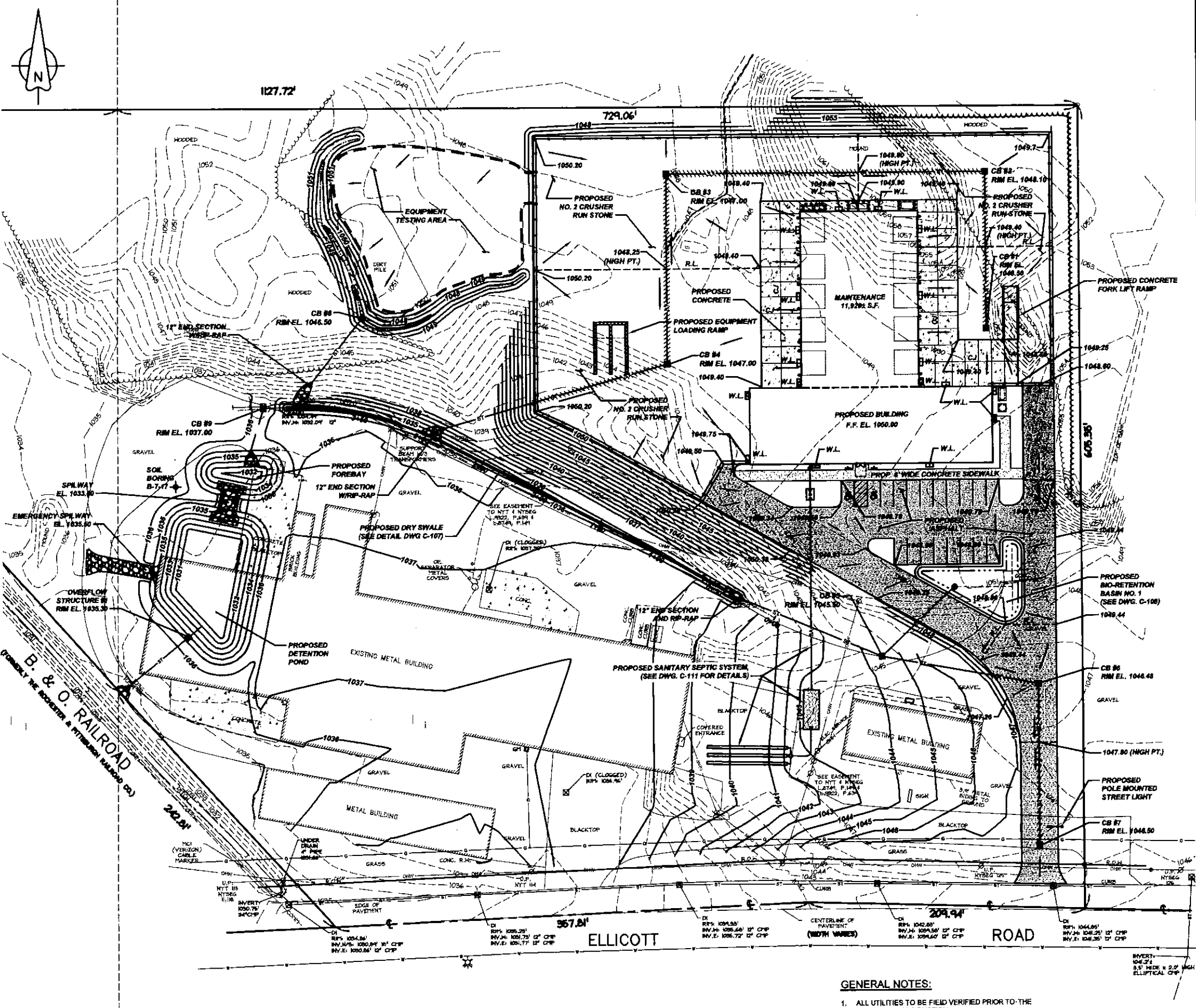
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SECTION 7209, PROVISION 2 OF THE NEW YORK STATE  
EDUCATION LAW.

|                |           |
|----------------|-----------|
| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-18-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
| 1" = 1 INCH    |           |
| SHEET No.      | 4 OF 15   |
| <b>C-103</b>   |           |

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**GENERAL NOTES:**

1. THE CONTRACTOR SHALL COMPLY WITH THE TOWN OF AURORA STANDARD DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE TOWN OF AURORA ENG. DEPT. OF ANY HAZARDOUS SUBSTANCE ENCOUNTERED DURING THE CONSTRUCTION OF THE WORK. HE SHALL AT HIS EXPENSE, CONFORM TO ALL LAWS, RULES, REGULATIONS AND DIRECTIONS AS PROMULGATED BY THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, THE NEW YORK STATE DEPARTMENT OF HEALTH AND ANY SUCH LOCAL RULES, ORDINANCES AND LAWS WHEN ENCOUNTERING OR WORKING WITH ANY SUCH HAZARDOUS SUBSTANCE.
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13. CAST IN PLACE CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF N.Y.S.D.O.T. STANDARD SPECIFICATION SECTION 601 FOR PORTLAND CEMENT CONCRETE.
14. MANHOLES AND RECEIVERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH N.Y.S.D.O.T. STANDARD SPECIFICATION 604.



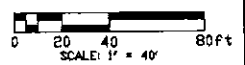
**LEGEND**

|  |                                      |
|--|--------------------------------------|
|  | EXIST. UTILITY POLE W/GUY POST       |
|  | EXIST. VERIZON CABLE MARKER          |
|  | EXIST. BOLLARD                       |
|  | EXIST. DROP INLET                    |
|  | EXIST. HYDRANT                       |
|  | EXIST. WATER SERVICE BOX             |
|  | EXIST. GAS METER                     |
|  | PROPOSED SANITARY SEWER              |
|  | PROPOSED STORM SEWER                 |
|  | PROPOSED PIPE (SELECT FILL REQUIRED) |
|  | EXISTING WATERLINE                   |
|  | EXISTING GAS LINE                    |
|  | EXISTING STORM SEWER LINE            |
|  | EXISTING OVERHEAD WIRE (POWER)       |
|  | EXISTING COMMUNICATIONS CABLE        |
|  | PROPOSED HEAVY DUTY ASPHALT AREA     |
|  | PROPOSED REGULAR DUTY ASPHALT AREA   |
|  | PROPOSED CONTOUR LINE                |
|  | EXISTING CONTOUR LINE                |
|  | PROPOSED SPOT ELEVATION              |
|  | PROPOSED CATCH BASIN                 |
|  | PROPOSED WALL LIGHT (BY OTHERS)      |

**1 GRADING AND PAVING PLAN**  
SCALE: 1" = 40 FT

**GENERAL NOTES:**

1. ALL UTILITIES TO BE FIELD VERIFIED PRIOR TO THE START OF CONSTRUCTION.
2. SURVEY PREPARED BY NUSSBAUMER AND CLARKE, JUNE, 2017.



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**REGULATORY REVIEW  
NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS**  
280 ELLICOTT ROAD, AURORA NY  
**GRADING AND PAVING PLAN**

**REVISIONS**

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 0   |             |      |

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**PROJECT NUMBER** 17-J5-0000  
**DATE** 06-18-17  
**DRAWN BY** TJB  
**DESIGNED BY** TJB  
**CHECKED BY** AHG  
**APPROVED BY**  
**SCALE:** AS NOTED  
**SHEET No.** 5 OF 15  
**C-104**

17-J5-0000 - five star equipment building, grading & drainage plan.dwg 6/18/2017 TJB/TJC

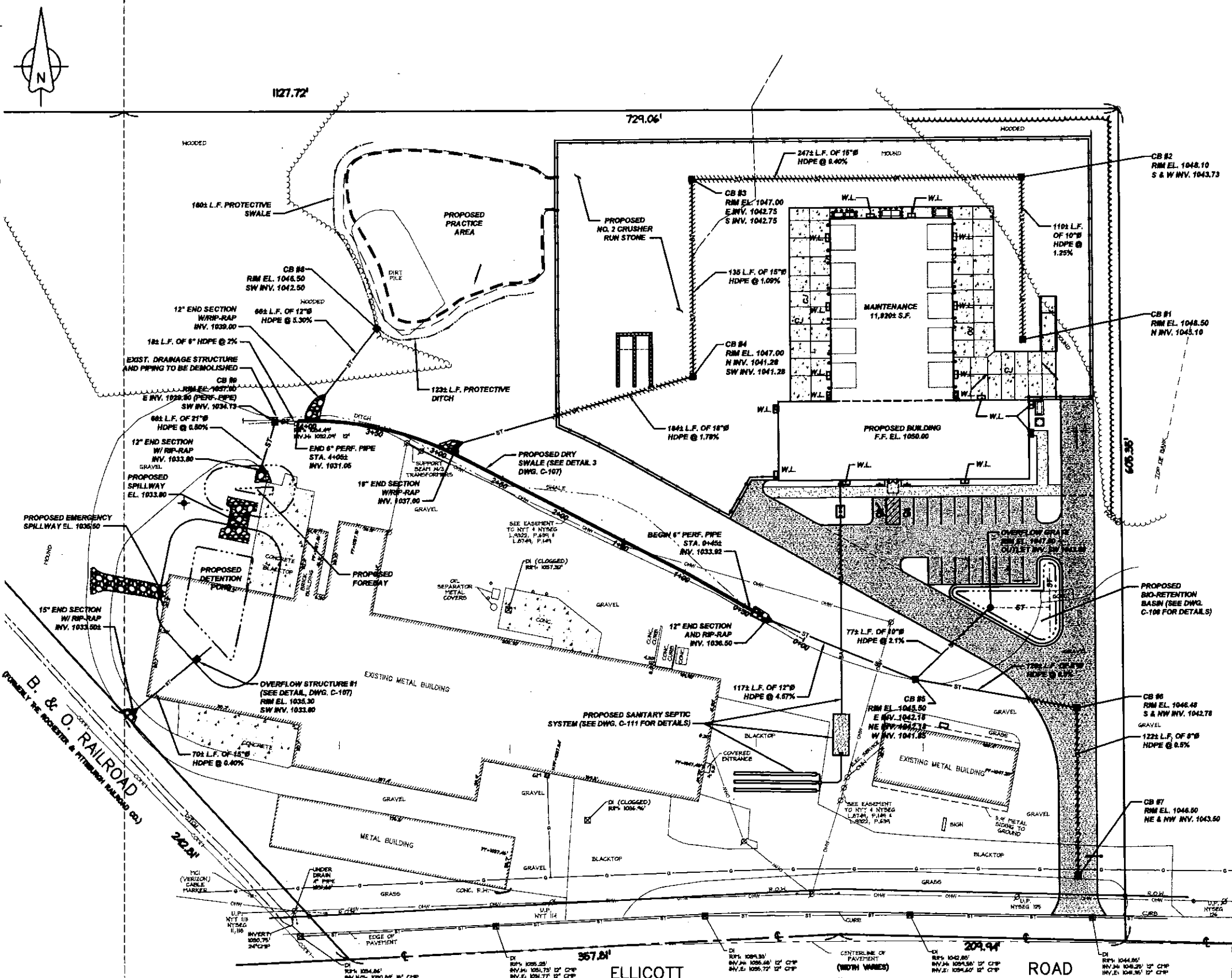


**GENERAL NOTES:**

1. THE CONTRACTOR SHALL COMPLY WITH THE TOWN OF AURORA STANDARD DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE TOWN OF AURORA ENG. DEPT. OF ANY HAZARDOUS SUBSTANCE ENCOUNTERED DURING THE CONSTRUCTION OF THE WORK. HE SHALL AT HIS EXPENSE, CONFORM TO ALL LAWS, RULES, REGULATIONS AND DIRECTIONS AS PROMULGATED BY THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, THE NEW YORK STATE DEPARTMENT OF HEALTH AND ANY SUCH LOCAL RULES, ORDINANCES AND LAWS WHEN ENCOUNTERING OR WORKING WITH ANY SUCH HAZARDOUS SUBSTANCE.
3. THE CONTRACTOR SHALL COMPLY IN ALL RESPECTS TO THE INDUSTRIAL CODE PART (RULE NO.) 53 RELATING TO CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES, AS ISSUED BY THE STATE OF NEW YORK DEPARTMENT OF LABOR, BOARD OF STANDARD AND APPEALS.
4. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF THE PIPE LAYING OPERATION, SO THAT, IF MINOR ADJUSTMENTS MUST BE MADE IN ELEVATION AND/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, SAID CHANGES CAN BE MADE IN ADVANCE OF THE WORK.
5. WHERE SUCH FACILITIES ARE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER, HE SHALL CERTIFY TO THE ENGINEERING DEPARTMENT OF THE TOWN OF AURORA THAT SAID FACILITIES AS CONSTRUCTED WERE SUPERVISED BY HIMSELF (HERSELF) AND THAT THE WORKS HAVE BEEN FULLY COMPLETED IN ACCORDANCE WITH THE APPROVED ENGINEERING REPORTS, PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS AND ANY AND ALL ADDENDA TO SAME.
6. THE CONSTRUCTION OF THE FACILITIES SHALL BE UNDER THE SUPERVISION OF A PERSON OR FIRM QUALIFIED TO PRACTICE PROFESSIONAL ENGINEERING IN NEW YORK STATE UNDER THE EDUCATION LAW OF THE STATE, WHENEVER ENGINEERING SERVICES ARE REQUIRED BY SUCH LAW FOR SUCH PURPOSES.
7. UNSUITABLE MATERIALS SUCH AS FROZEN ORGANIC AND/OR VEGETABLE MATERIAL, DEBRIS, TREES, LUMBER, LARGE STONES OR CLODS (6" OR LARGER), MUCK, PEAT, ORGANIC SILT WILL NOT BE ACCEPTABLE FILL AND CERTAIN MAN-MADE DEPOSITS OF INDUSTRIAL WASTE, SLUDGE OR LANDFILL MAY ALSO BE DETERMINED AS UNSUITABLE HAZARDOUS MATERIAL.
8. THE COMPACTION OF ALL MATERIALS WILL OCCUR AT 6" INCREMENTS.
9. VERIFICATION OF ALL EXISTING EASEMENTS IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND THEY MUST BE SHOWN ALONG WITH ALL PROPOSED EASEMENTS ON PLAN DRAWINGS.
10. SHOULD A FLUID CONDITION BE ENCOUNTERED AT THE TRENCH BOTTOM, THE CONTRACTOR IS TO INSTALL ADDITIONAL STONE CRADLE AS ORDERED BY THE ENGINEER.
11. ALL PIPE CROSSING UNDER PAVED AREAS ARE TO BE BACKFILLED TO SUBGRADE WITH COMPACTED SELECT MATERIAL TO FIVE (5) FEET OUTSIDE THE PAVEMENT EDGES.
12. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED TREE EXPERT TO REMOVE, WHERE NECESSARY, BRANCHES WHICH INTERFERE WITH THE CONSTRUCTION OPERATION, OR REPAIR TREES HAVING SUFFERED DAMAGE BY CONSTRUCTION ACTIVITIES. THE COST INVOLVED IN THE ABOVE IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.
13. CAST IN PLACE CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF N.Y.S.D.O.T. STANDARD SPECIFICATION SECTION 501 FOR PORTLAND CEMENT CONCRETE.
14. MANHOLES AND RECEIVERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH N.Y.S.D.O.T. STANDARD SPECIFICATION 604.

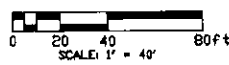
**LEGEND**

- EXIST. UTILITY POLE W/ GUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. BOLLARD
- EXIST. DROP INLET
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED PIPE (SELECT FILL REQUIRED)
- EXISTING WATERLINE
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING OVERHEAD WIRE (POWER)
- EXISTING COMMUNICATIONS CABLE
- PROPOSED CATCH BASIN
- PROPOSED WALL LIGHT (BY OTHERS)
- PROPOSED REGULAR DUTY ASPHALT AREA
- PROPOSED HEAVY DUTY ASPHALT AREA



**UTILITY PLAN**  
SCALE: 1" = 40 FT

- NOTES:**
1. ALL UTILITIES TO BE FIELD VERIFIED PRIOR TO THE START OF CONSTRUCTION.
  2. SURVEY PREPARED BY NUSSBAUMER AND CLARKE, JUNE, 2017.
  3. EXISTING WATER LINE SERVICING EXISTING BUILDINGS TO BE FIELD VERIFIED FOR SIZE, LOCATION AND CONDITION. IF DEEMED IN GOOD CONDITION, CONTRACTOR SHALL EXTEND SERVICE TO NEW BUILDING LOCATION AS PER PLUMBING PLANS DICTATE INSIDE THE BUILDING. INSTALLATION OF WATERLINE SHALL BE CONSTRUCTED PER ERIE COUNTY WATER AUTHORITY STANDARDS.



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**REGULATORY REVIEW  
NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS**  
 280 ELLICOTT ROAD, AURORA NY

**UTILITY PLAN**

**REVISIONS**

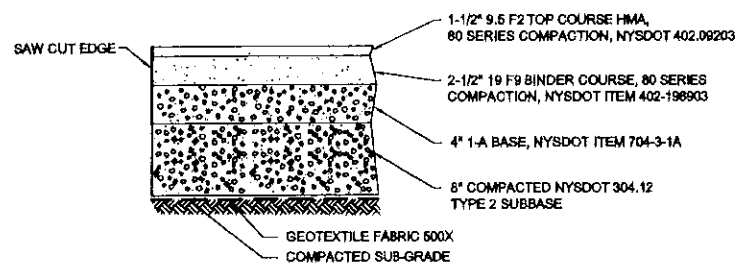
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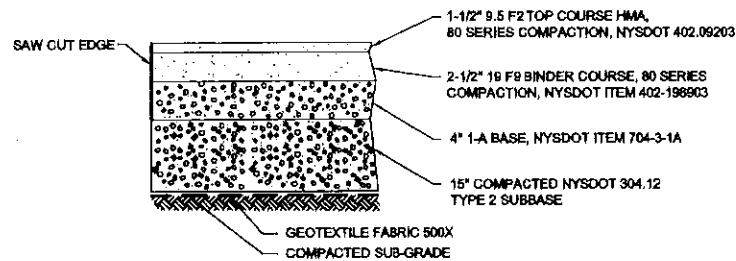
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| PROJECT NUMBER | 17J6-0030 |
| DATE           | 06-16-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
| 1" = 40'       |           |
| SHEET No.      | 6 OF 15   |
| <b>C-105</b>   |           |

H:\land development\17J6-0030 - five star equipment\working drawings\Utilities\C-105-grading & drainage plan.dwg 6/16/2017 TBOYLE



NOTE: THE BINDER AND BASE COURSES MAY CONSIST OF RECYCLED ASPHALT MATERIAL

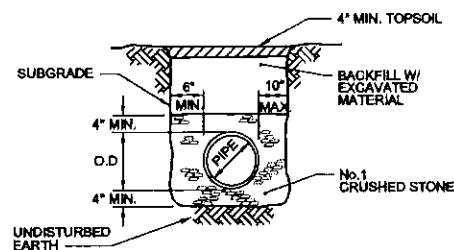
8 TYPICAL ASPHALT PAVEMENT SECTION  
SCALE: NOT TO SCALE



NOTE: THE BINDER AND BASE COURSES MAY CONSIST OF RECYCLED ASPHALT MATERIAL

NOTE: SEE GRADING AND PAVING PLAN FOR LOCATIONS

5 HEAVY DUTY ASPHALT PAVEMENT SECTION  
SCALE: NOT TO SCALE



SPECIAL NOTE REGARDING TRENCH BACKFILL MATERIAL:

- SHALE SHALL NOT BE USED AS BACKFILL MATERIAL FOR PIPE CROSSINGS OF THE PAVEMENT AND CURBS.
- SHALE SHALL NOT BE PLACED DIRECTLY AGAINST THE UNPROTECTED PIPE SURFACE. A MINIMUM OF 12" OF BEDDING STONE OR SELECT MATERIAL SHALL OVERLAY THE CROWN OF THE PIPE PRIOR TO PLACEMENT OF SHALE MATERIAL.

NOTES:  
MATERIALS USED FOR THE CONSTRUCTION OF CATCH BASINS AND STORM MANHOLES SHALL MEET THE REQUIREMENTS SPECIFIED IN NYS DOT SECTION 604-2.

CONSTRUCTION OF STORM SEWERS AND UNDERDRAINS SHALL MEET THE REQUIREMENTS SPECIFIED IN NYS DOT SECTION 603-3 AND 605-3 AS APPLICABLE.

CONSTRUCTION OF CATCH BASINS AND STORM MANHOLES SHALL MEET THE REQUIREMENTS SPECIFIED IN NYS DOT SECTION 604-3.

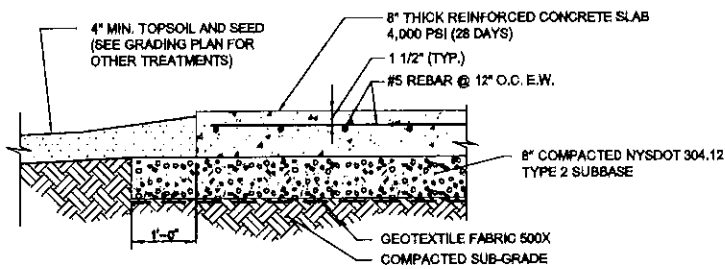
MATERIALS USED FOR UNDERDRAIN FILTER MATERIAL SHALL MEET THE REQUIREMENTS SPECIFIED IN NYS DOT SECTION 605-2 UNDERDRAIN FILTER TYPE II.

THE CONTRACTOR SHALL SCHEDULE AND CONDUCT HISHER OPERATIONS TO MINIMIZE EROSION OF SOILS AND TO MINIMIZE SILTING AND MUDDING OF STREAMS, RIVERS, IRRIGATION SYSTEMS, IMPOUNDMENTS (LAKES, RESERVOIRS, ECT.) AND LANDS ADJACENT TO OR AFFECTED BY THE WORK. CONSTRUCTION OF DRAINAGE FACILITIES AND PERFORMANCE OF OTHER CONTRACT WORK WHICH WILL CONTRIBUTE TO THE CONTROL OF EROSION AND SEDIMENTATION SHALL BE CARRIED OUT IN CONJUNCTION WITH EARTHWORK OPERATIONS OR AS SOON THEREAFTER AS PRACTICAL.

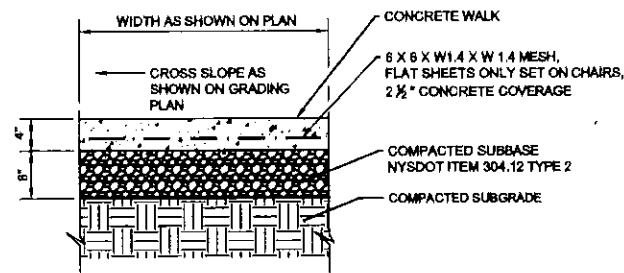
THE CONTRACTOR SHALL NOT DISCHARGE DUST INTO THE ATMOSPHERE OF SUCH QUANTITY, CHARACTER OR DURATION THAT IT UNREASONABLY INTERFERES WITH THE COMFORTABLE ENJOYMENT OF LIFE AND PROPERTY, OR IS HARMFUL TO PLANTS AND ANIMALS.

ALL APPLICABLE REGULATIONS OF FISH, WILDLIFE, AND ENVIRONMENTAL PROTECTION AGENCIES AND STATUTES RELATING TO THE PREVENTION ABATEMENT OF POLLUTION SHALL BE COMPLIED WITH.

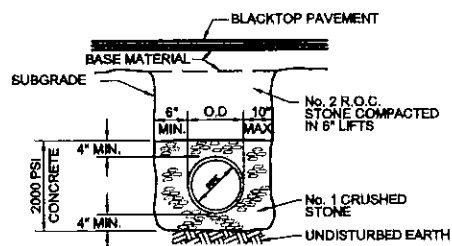
1 TYPICAL SECTION FOR EARTH BACKFILL  
SCALE: NOT TO SCALE



9 TYPICAL CONCRETE PAVEMENT DETAIL  
SCALE: NOT TO SCALE



6 CONCRETE SIDEWALK DETAIL  
SCALE: NOT TO SCALE



PIPE BEDDING MATERIAL (1)

NO. 1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYS DOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE (1) INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER. NO SLAG SHALL BE ALLOWED.

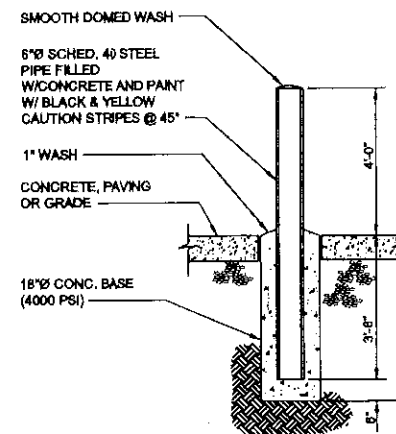
NOTES:

- PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.
- TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
- AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.
- TEMPORARY SHEETING AT CONTRACTOR'S OPTION AND EXPENSE. TEMPORARY SHEETING TO MEET OSHA REQUIREMENT.

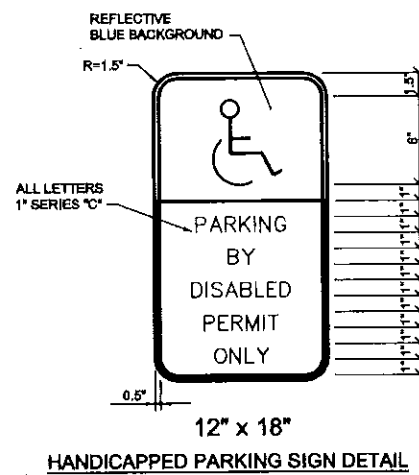
PIPE MATERIAL SPECIFICATIONS

- HDPE PIPE - CORRUGATED POLYETHYLENE PIPE (8" TO 24" HDPE) SHALL MEET AASHTO M284 SPECS. JOINTS TO BE FIELD JOINED WITH STANDARD SPLIT COUPLERS.
- REINFORCED CONCRETE PIPE SHALL BE CLASS III AND MEET ASTM DESIGNATION C-76 SPECS. JOINTS FOR RCP SHALL BE EQUIPPED WITH ROUND RUBBER GASKETS.
- CORRUGATED METAL PIPE SHALL BE ALUMINIZED STEEL TYPE 2 WITH A MINIMUM 16 GAUGE AND MEET ASTM DESIGNATION A-444 SPECS. JOINTS FOR CMP SHALL BE FIELD JOINED WITH ALUMINIZED METAL BANDS.

2 TYPICAL SECTION FOR SELECT BACKFILL AND CONCRETE ENCASEMENT STORM TRENCH DETAILS  
SCALE: NOT TO SCALE



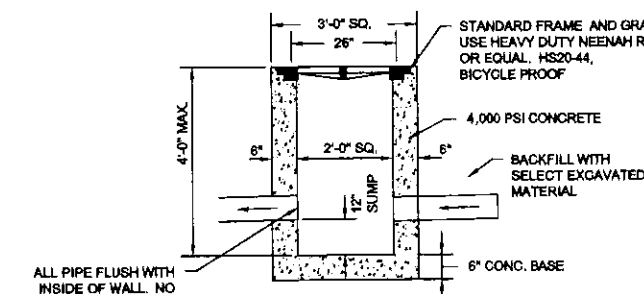
10 TYPICAL BOLLARD DETAIL  
SCALE: NOT TO SCALE



7 TYPICAL SIGN POST INSTALLATION DETAIL  
SCALE: NOT TO SCALE

GENERAL HANDICAP SIGN NOTES:

- TOP PORTION OF FTP-25 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
- BOTTOM PORTION OF FTP-25 SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
- FTP-25 SHALL BE FABRICATED ON ONE PANEL. THE SIGN SHALL BE PLACED A MINIMUM OF 3' FROM THE WHEEL STOP OR THE BACK OF CURB (WHERE APPLICABLE).



ALL PIPE FLUSH WITH INSIDE OF WALL. NO KNOCKOUTS PERMITTED

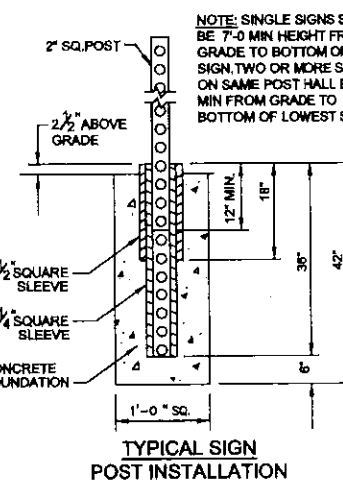
NOTES:

- LAY STRUCTURE ON 6" MIN. BED OF COMPACTED NYS DOT TYPE 2 MATERIAL.
- CATCH BASIN SHALL BE KISTNER 2424 AS REQUIRED TO ACHIEVE 12" SUMP, OR EQUAL.

3 CATCH BASIN DETAIL  
SCALE: NOT TO SCALE

GENERAL NOTES:

- UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THIS INFORMATION VERIFIED AND LOCATED PRIOR TO CONSTRUCTION.
- WHERE EXISTING UTILITIES ARE REQUIRED TO BE RELOCATED, THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY CONCERNED REGARDING SUCH RELOCATION. THE COST FOR RELOCATION OF UTILITIES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR PIPE, INSTALLATION AND TRENCHING.
- ALL DEBRIS AND SPOIL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- BEFORE YOU DIG OR BLAST IN WESTERN NEW YORK CALL "DIG SAFELY NEW YORK" 1-800-862-7862
- SHALE SHALL NOT BE USED AS BACKFILL MATERIAL FOR PIPE CROSSINGS OF THE PAVEMENT AND CURBS.
- PRIOR TO SUBBASE COURSE PLACEMENT, THE SURFACE ON WHICH THE SUBBASE IS TO BE PLACED SHALL BE THOROUGHLY COMPACTED TO THE 95% PROCTOR DENSITY AND PROOF ROLLED. PROOF ROLLING SHALL BE IN ACCORDANCE WITH SECTION 203-3.02C OF THE NYS DOT STANDARD SPECIFICATIONS.
- THE PARKING LOT SHALL BE STRIPED AS SHOWN ON THE PLAN.
- A NYS DOT HIGHWAY WORK PERMIT IS REQUIRED FOR ANY WORK WITHIN THE STATE R.O.W.



NOTES:

- MATERIAL SHALL BE GRAY CAST IRON CONFORMING TO A.S.T.M. A48 (LATEST REVISION) CLASS 30B.
- UNITS DESIGNED HEAVY DUTY FOR A.A.S.H.T.O. HS20-44 WHEEL LOADS.

4 FRAME AND GRATE DETAIL  
SCALE: NOT TO SCALE

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REGULATORY REVIEW  
NOT FOR CONSTRUCTION

FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS  
280 ELLICOTT ROAD, AURORA NY  
SITE DETAILS 1

| REVISIONS |             |      |
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| No.       | DESCRIPTION | DATE |
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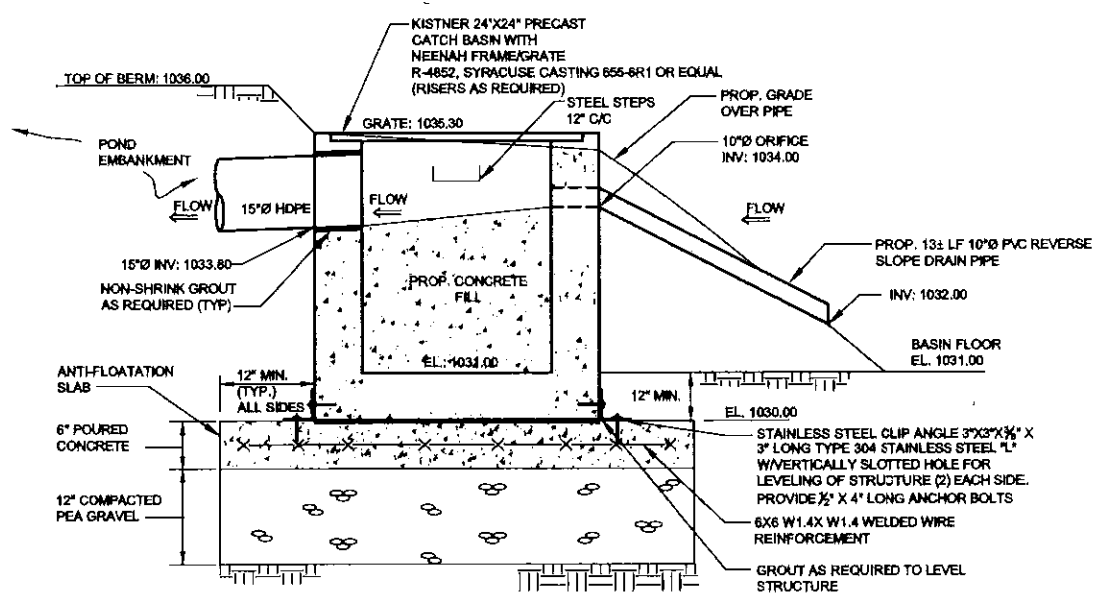
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| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-15-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
| 1" = 1 INCH    |           |
| SHEET No.      | 7 OF 15   |

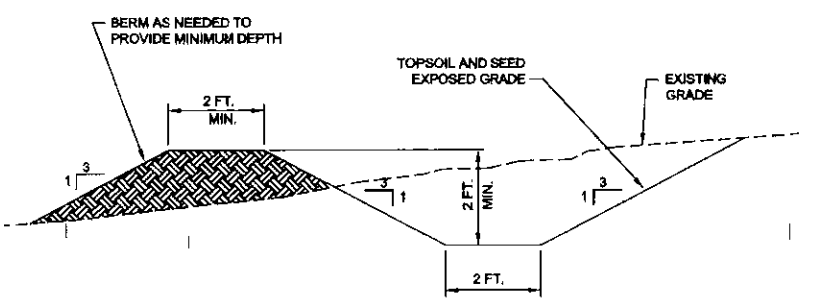
C-106

**REGULATORY REVIEW  
 NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
 BUILDING AND SITE IMPROVEMENTS**  
 280 ELLICOTT ROAD, AURORA NY  
**SITE DETAILS 2**



**6 OVERFLOW STRUCTURE NO. 1 DETAIL**  
 SCALE: NOT TO SCALE

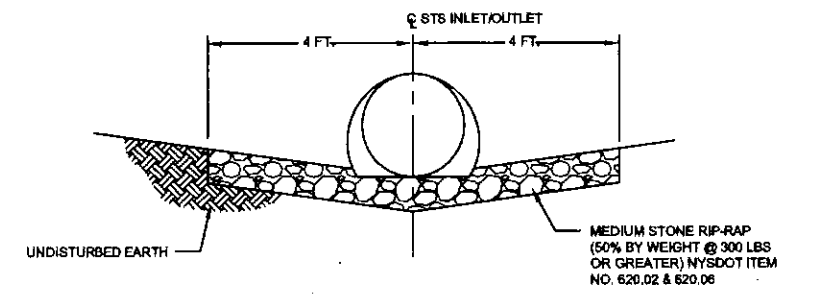


**4 TYPICAL DITCH SECTION**  
 SCALE: NOT TO SCALE

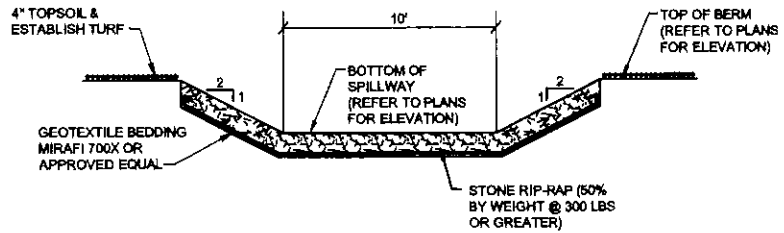
| STONE FILLING ITEM | SEE NOTES | STONE SIZE                                     | PERCENT OF TOTAL BY WEIGHT | NYS DOT ITEM NO. |
|--------------------|-----------|------------------------------------------------|----------------------------|------------------|
| MEDIUM             | 1, 2      | HEAVIER THAN 100 POUNDS<br>SMALLER THAN 6-INCH | 50-100<br>0-10             | 620.04           |

- NOTES:  
 1. MATERIALS SHALL CONTAIN LESS THAN 20 PERCENT OF STONES WITH A RATIO OF MAXIMUM TO MINIMUM DIMENSIONS GREATER THAN THREE.  
 2. MATERIALS SHALL CONTAIN A SUFFICIENT AMOUNT OF STONES SMALLER THAN THE AVERAGE STONE SIZE TO FILL IN THE SPACES BETWEEN THE LARGER STONES.

**5 MEDIUM STONE RIP-RAP**  
 SCALE: NOT TO SCALE



**1 RIP-RAP POND DETAIL**  
 SCALE: NOT TO SCALE



**2 SPILLWAY DETAIL**  
 SCALE: NOT TO SCALE

1. THE DRY SWALE SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE RAINFOREST AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

2. DRY SWALE SOIL MIX SHALL CONSIST OF THE FOLLOWING:

| ITEM                       | COMPOSITION: BY VOLUME | REFERENCE               |
|----------------------------|------------------------|-------------------------|
| PLANTING SOIL              | 30%                    | SEE BELOW.              |
| SHREDDED 2X HARDWOOD MULCH | 20%                    | SEE BELOW.              |
| SAND                       | 50%                    | ASTM C33 FINE AGGREGATE |

3. THE USDA TEXTURAL CLASSIFICATION OF THE PLANTING SOIL FOR THE DRY SWALE SOIL MIXTURE SHALL BE LOAMY SAND OR SANDY LOAM. PLANTING SOIL SHALL BE SALVAGED OR FURNISHED. PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

| ITEM                      | PERCENT BY WEIGHT* | TEST METHOD |
|---------------------------|--------------------|-------------|
| SAND (7.0 - 0.050 MM)     | 50 - 85%           | AASHTO T88  |
| SILT (0.050 - 0.002 MM)   | 0 - 50%            | AASHTO T88  |
| CLAY (LESS THAN 0.002 MM) | 10 - 20%           | AASHTO T88  |
| ORGANIC MATTER            | 1.5 - 10%          | AASHTO T194 |

4. THE TEXTURAL ANALYSIS FOR THE PLANTING SOIL SHALL BE AS FOLLOWS:

| ASTM #11 SIEVE SIZE | % FINER PERCENT PASSING BY WEIGHT |
|---------------------|-----------------------------------|
| 2 IN.               | 100                               |
| NO. 4               | 90                                |
| NO. 10              | 80                                |

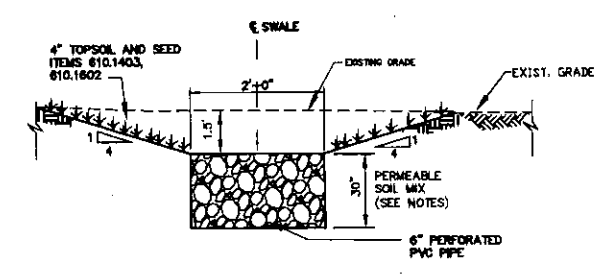
5. DRY SWALE SOIL MIXTURE SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

| ITEM                                                    | CRITERIA              | TEST METHOD |
|---------------------------------------------------------|-----------------------|-------------|
| CORRECTED PH                                            | 5.5 - 7.5             | ASTM D4972  |
| MAGNESIUM                                               | MINIMUM 32 PPM        | *           |
| PHOSPHORUS (PHOSPHATE - P <sub>2</sub> O <sub>5</sub> ) | NOT TO EXCEED 68 PPM  | *           |
| POTASSIUM (K <sub>2</sub> O)                            | MINIMUM 78 PPM        | *           |
| SOLUBLE SALTS                                           | NOT TO EXCEED 500 PPM | *           |

\* USE AUTHORIZED SOIL TEST PROCEDURES.

6. DRY SWALE SOIL MIXTURE SHALL BE MIXED TO A HOMOGENEOUS CONSISTENCY TO THE SATISFACTION OF THE ENGINEER.

**SOIL MIXTURE NOTES**



**3 DRY SWALE DETAIL**  
 SCALE: NOT TO SCALE

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| No.       | DESCRIPTION | DATE |
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| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-18-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    |           |

SCALE: AS NOTED  
 1" = 1' INCH  
 SHEET No. 8 OF 15



**BIO-RETENTION BASIN AND FILTER MEDIA NOTES**

1. THE BIORETENTION SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE RAIN GARDEN AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

2. BIORETENTION SOIL MIX SHALL CONSIST OF THE FOLLOWING:

| ITEM                       | COMPOSITION BY VOLUME | REFERENCE               |
|----------------------------|-----------------------|-------------------------|
| PLANTING SOIL              | 30%                   | SEE BELOW.              |
| SHREDDED 2X HARDWOOD MULCH | 20%                   | SEE BELOW.              |
| SAND                       | 50%                   | ASTM C33 FINE AGGREGATE |

3. THE USDA TEXTURAL CLASSIFICATION OF THE PLANTING SOIL FOR THE BIORETENTION SOIL MIXTURE SHALL BE LOAMY SAND OR SANDY LOAM. PLANTING SOIL SHALL BE SALVAGED OR FURNISHED. PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

| ITEM                      | PERCENT BY WEIGHT | TEST METHOD |
|---------------------------|-------------------|-------------|
| SAND (2.0 - 0.050 MM)     | 50 - 85%          | AASHTO T88  |
| SILT (0.050 - 0.002 MM)   | 0 - 50%           | AASHTO T88  |
| CLAY (LESS THAN 0.002 MM) | 10 - 20%          | AASHTO T88  |
| ORGANIC MATTER            | 1.5 - 10%         | AASHTO T194 |

4. THE TEXTURAL ANALYSIS FOR THE PLANTING SOIL SHALL BE AS FOLLOWS:

| ASTM #11 SIEVE SIZE | MINIMUM PERCENT PASSING BY WEIGHT |
|---------------------|-----------------------------------|
| 2 IN.               | 100                               |
| NO. 4               | 90                                |
| NO. 10              | 80                                |

5. THE BIORETENTION SOIL MIXTURE SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

| ITEM                                                    | CRITERIA              | TEST METHOD |
|---------------------------------------------------------|-----------------------|-------------|
| CORRECTED PH                                            | 5.5 - 7.5             | ASTM D4972  |
| MAGNESIUM                                               | MINIMUM 32 PPM        | *           |
| PHOSPHORUS (PHOSPHATE - P <sub>2</sub> O <sub>5</sub> ) | NOT TO EXCEED 68 PPM  | *           |
| POTASSIUM (K <sub>2</sub> O)                            | MINIMUM 78 PPM        | *           |
| SOLUBLE SALTS                                           | NOT TO EXCEED 500 PPM | *           |

\* USE AUTHORIZED SOIL TEST PROCEDURES.

6. THE BIORETENTION SOIL MIXTURE SHALL BE MIXED TO A HOMOGENEOUS CONSISTENCY TO THE SATISFACTION OF THE ENGINEER.

7. ALL PLANTS, UNLESS OTHERWISE SPECIFICALLY PERMITTED, SHALL CONFORM TO THE STANDARDS OF THE CURRENT EDITION OF AMERICAN STANDARD FOR NURSERY STOCK AS APPROVED BY THE AMERICAN STANDARDS INSTITUTE, INC. ALL PLANT GRADES SHALL BE THOSE ESTABLISHED IN THE CURRENT EDITION OF AMERICAN STANDARDS FOR NURSERY STOCK. ONLY ONE SIZE PER GRADE WILL BE LISTED RATHER THAN A SIZE RANGE. THE ONE SIZE SHALL MEAN THE MINIMUM SIZE FOR THAT GRADE AND SHALL INCLUDE PLANTS FROM THAT SIZE UP TO BUT NOT INCLUDING THE NEXT LARGER GRADE SIZE.

8. ALL PLANT MATERIALS SHALL HAVE NORMAL, WELL DEVELOPED BRANCHES AND A VIGOROUS ROOT SYSTEM. THEY SHALL BE HEALTHY PLANTS FREE FROM PHYSICAL DEFECTS, PLANT DISEASES, AND INSECT PESTS. SHADE AND FLOWERING TREES SHALL BE SYMMETRICALLY BALANCED. MAJOR BRANCHES SHALL NOT HAVE V SHAPED CROTCHES CAPABLE OF CAUSING

STRUCTURAL WEAKNESS. TRUNKS SHALL BE FREE OF UNHEALED BRANCH REMOVAL WOUNDS GREATER THAN A 1 IN. DIAMETER.

9. SHADE TREES SHALL HAVE A SINGLE MAIN TRUNK. TRUNKS SHALL BE FREE OF BRANCHES BELOW THE FOLLOWING HEIGHTS:

| CALIPER (IN.)  | HEIGHT (FT) |
|----------------|-------------|
| 1-1/2 TO 2-1/2 | 5           |
| 3              | 6           |

10. PLANT MATERIALS SHALL BE ABLE TO TOLERATE SATURATED SOIL CONDITIONS FOR THE LENGTH OF TIME ANTICIPATED IN THE DESIGN STORM EVENT, AS WELL AS SNOW MELT CHEMICALS AND OTHER ANTICIPATED RUNOFF CONSTITUENTS.

11. WATER USED IN THE PLANTING, ESTABLISHING, OR CARING FOR VEGETATION SHALL BE FREE FROM ANY SUBSTANCE THAT IS INJURIOUS TO PLANT LIFE.

12. RAIN GARDENS SHALL NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREAS ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. RAIN GARDENS SHALL NOT BE USED AS SEDIMENT CONTROL FACILITIES. NO HEAVY EQUIPMENT SHALL OPERATE WITHIN THE PERIMETER OF A RAIN GARDEN DURING EXCAVATION, UNDERDRAIN PLACEMENT, BACKFILLING, PLANTING, OR MULCHING OF THE FACILITY.

13. RAIN GARDENS SHALL BE EXCAVATED TO THE DIMENSIONS, SIDE SLOPES, AND ELEVATIONS SHOWN ON THE CONTRACT PLANS. THE METHOD OF EXCAVATION SHALL MINIMIZE THE COMPACTION OF THE BOTTOM OF THE RAIN GARDEN. EXCAVATORS AND BACKHOES SHALL OPERATE ON THE GROUND ADJACENT TO THE RAIN GARDEN TO THE EXTENT POSSIBLE. NO HEAVY EQUIPMENT SHALL BE ALLOWED ON THE BOTTOM OF THE RAIN GARDEN.

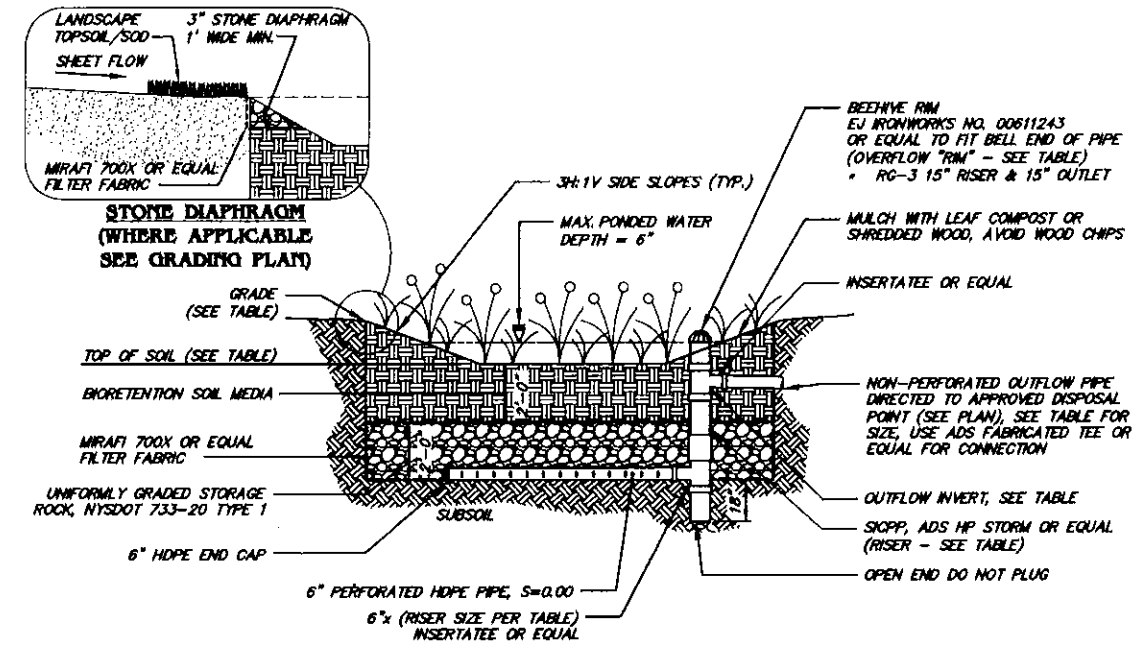
14. NO HEAVY EQUIPMENT SHALL BE USED WITHIN THE PERIMETER OF THE RAIN GARDENS BEFORE, DURING, OR AFTER THE PLACEMENT OF THE BIORETENTION SOIL MIX. THE BIORETENTION SOIL MIX SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 12 INCHES. THE BIORETENTION SOIL MIX SHALL BE COMPACTED BY SATURATING THE ENTIRE AREA OF THE RAIN GARDEN AFTER EACH LIFT OF BIORETENTION SOIL MIX IS PLACED UNTIL WATER FLOWS FROM THE UNDERDRAIN. WATER FOR SATURATION SHALL BE APPLIED BY SPRAYING OR SPRINKLING. SATURATION OF EACH LIFT SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER. AN APPROPRIATE SEDIMENT CONTROL DEVICE SHALL BE USED TO TREAT ANY SEDIMENT-LADEN WATER DISCHARGED FROM THE UNDERDRAIN. IF THE BIORETENTION SOIL MIX BECOMES CONTAMINATED DURING THE CONSTRUCTION OF THE FACILITY, THE CONTAMINATED MATERIAL SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED MATERIAL AT NO ADDITIONAL COST TO THE OWNER. FINAL GRADING OF THE BIORETENTION SOIL MIX SHALL BE PERFORMED AFTER A 24-HOUR SETTLING PERIOD. FINAL ELEVATIONS SHALL BE WITHIN 2 INCHES OF ELEVATIONS SHOWN ON THE CONTRACT PLANS.

15. TREES, SHRUBS, AND OTHER PLANT MATERIALS SPECIFIED FOR BIORETENTION FACILITIES SHALL BE PLANTED AS SPECIFIED IN THE CONTRACT PLANS AND APPLICABLE LANDSCAPING STANDARDS WITH THE EXCEPTION THAT PESTICIDES, HERBICIDES, AND FERTILIZER SHALL NOT BE APPLIED DURING PLANTING UNDER ANY CIRCUMSTANCES. FURTHERMORE, PESTICIDES, FERTILIZER, AND ANY OTHER SOIL AMENDMENTS SHALL NOT BE APPLIED TO THE RAIN GARDENS DURING LANDSCAPE CONSTRUCTION, PLANT ESTABLISHMENT, OR MAINTENANCE.

16. ONCE PLANTS ARE IN PLACE, RAIN GARDENS SHALL BE MULCHED TO A UNIFORM THICKNESS OF 3 INCHES. THIS SHOULD BE DONE IMMEDIATELY AFTER GRADING TO REDUCE POTENTIAL OF ANY SILT ACCUMULATION ON SURFACE.

17. TWO TIMES SHREDDED HARDWOOD BARK SHALL CONSIST OF THE BARK FROM HARDWOOD TREES WHICH HAS BEEN MILLED AND SCREENED TO A MAXIMUM 4 IN. PARTICLE SIZE AND PROVIDE A UNIFORM TEXTURE FREE FROM SAWDUST, FOREIGN MATERIALS, AND ANY ARTIFICIALLY INTRODUCED CHEMICAL COMPOUNDS THAT WOULD BE DETRIMENTAL TO PLANT OR ANIMAL LIFE.

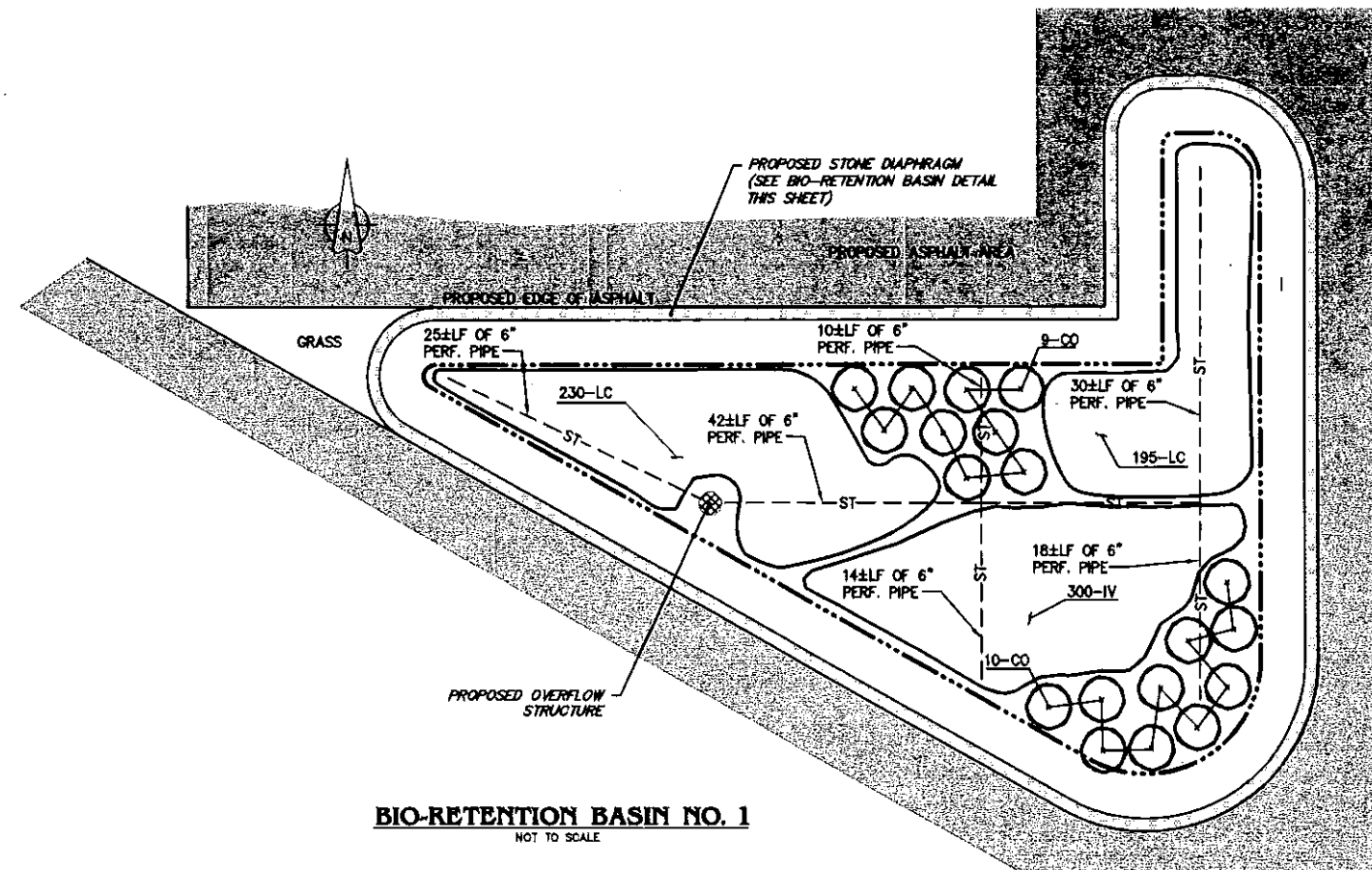
18. PLANT MATERIALS WILL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE PER EACH ITEM SPECIFIED IN THE CONTRACT DOCUMENTS. THE PAYMENT WILL BE FULL COMPENSATION FOR ALL SUPPORTS, WATERING DURING THE CONSTRUCTION PERIOD AND FOR ALL MATERIAL, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. IF AT ANY TIME DURING THE CONTRACT PERIOD ANY PLANTS BECOME UNACCEPTABLE, THEY SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.



**BIO-RETENTION BASIN DETAIL**  
NOT TO SCALE

| BIO-RETENTION BASIN NO. 1 TABLE |         |
|---------------------------------|---------|
| GRADE (RM ELEVATION)            | 1048.80 |
| MINIMUM AREA (SF)               | 2,653   |
| OVERFLOW GRATE (FT)             | 1048.30 |
| RISER PIPE DIA. (IN)            | 18.5    |
| OUTFLOW PIPE SIZE (IN)          | 10      |
| OUTFLOW INVERT (FT)             | 1043.80 |
| TOP OF SOIL (FT)                | 1047.80 |
| BOTTOM OF STONE (FT)            | 1043.80 |

| PLANTING SCHEDULE |          |                           |                 |              |
|-------------------|----------|---------------------------|-----------------|--------------|
| SHRUBS            |          |                           |                 |              |
| KEY               | QUANTITY | BOTANICAL NAME            | COMMON NAME     | MINIMUM SIZE |
| CO                | 19       | CEPHALANTHUS OCCIDENTALIS | BUTTON BUSH     | 24"          |
| PERENNIALS        |          |                           |                 |              |
| IV                | 300      | IRIS VERSICOLOR           | BLUE FLAG IRIS  | QUART        |
| LC                | 425      | LOBELIA CARDINALIS        | CARDINAL FLOWER | QUART        |



**BIO-RETENTION BASIN NO. 1**  
NOT TO SCALE

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**REGULATORY REVIEW  
NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS**  
280 ELLICOTT ROAD, AURORA NY  
**BIO-RETENTION BASIN AND DETAILS**

| REVISIONS |             |      |
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| No.       | DESCRIPTION | DATE |
|           |             |      |
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SECTION 7206, PROVISION 2 OF THE NEW YORK STATE  
EDUCATION LAW.

|                |           |
|----------------|-----------|
| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-18-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
| 1" = 1' INCH   |           |
| SHEET No.      | 6 OF 15   |
| <b>C-108</b>   |           |

**EROSION CONTROL NOTES:**

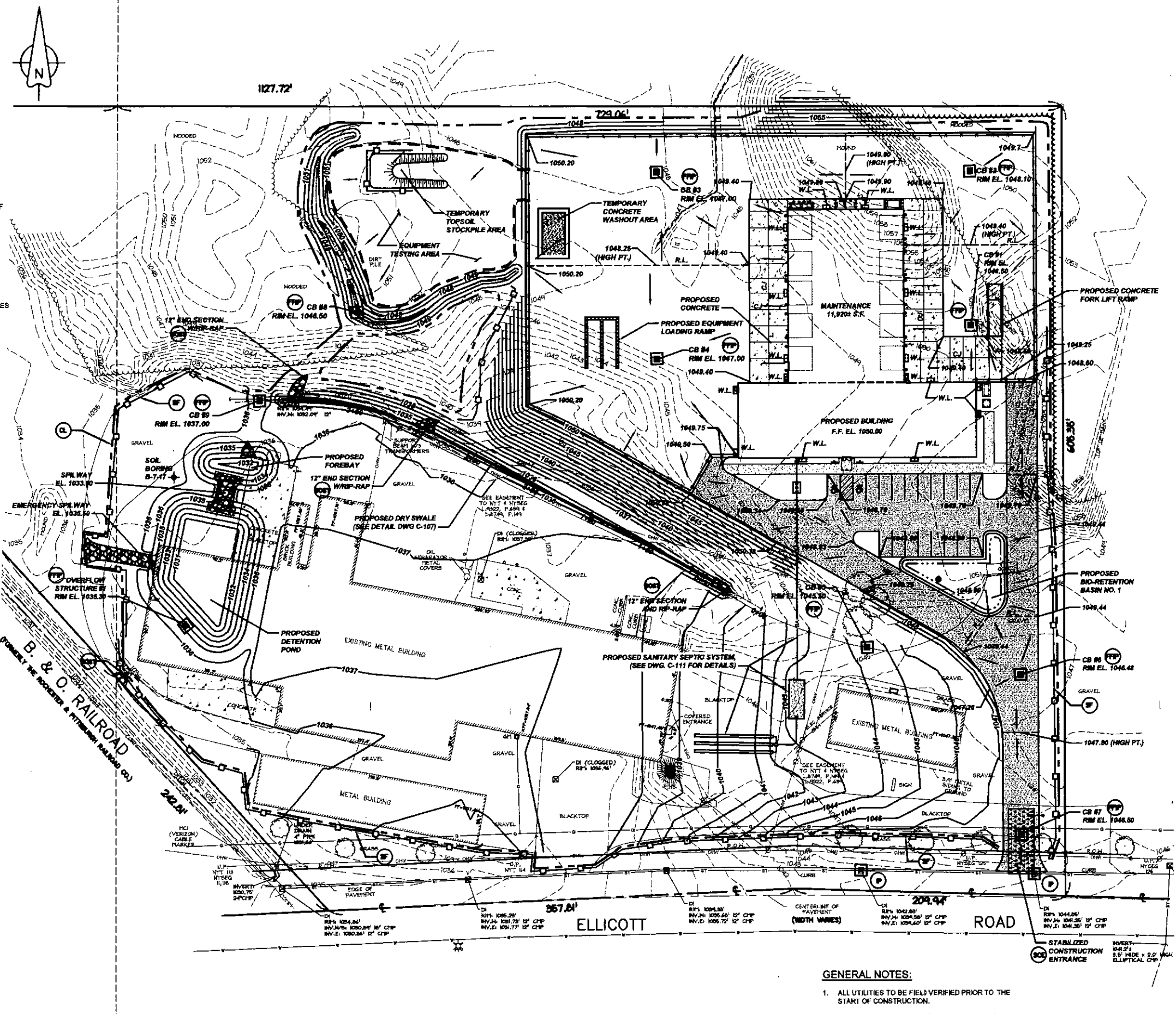
1. ALL DISTURBED AREAS TO BE GRADED, TOPSOILED AND SEEDED.
2. TEMPORARY STOCKPILE LOCATIONS TO BE APPROVED BY THE TOWN OF AURORA.
3. CLEARING SHALL BE LIMITED TO THE AREA THAT IS CURRENTLY UNDER DEVELOPMENT. NO CLEARING SHALL TAKE PLACE BEYOND WHAT IS NECESSARY TO INSTALL ROADWAYS, BUILDINGS, AND UTILITIES.
4. A COPY OF THE WEEKLY SITE INSPECTION REPORT IS TO BE PROVIDED TO THE TOWN OF AURORA.
5. REMOVAL OF TOPSOIL FROM SITE WILL REQUIRE A PERMIT FROM THE TOWN OF AURORA CODE ENFORCEMENT OFFICER.

**SEQUENCE OF OPERATIONS:**

1. NOTIFY SEDIMENT CONTROL INSPECTOR AT LEAST 24 HOURS PRIOR TO START OF CONSTRUCTION.
2. SURVEY AND STAKEOUT FOR CLEARING, STRIPPING AND EROSION CONTROL ACTIVITIES.
3. INSTALL EROSION AND SEDIMENT CONTROLS.
4. PERFORM THE NECESSARY WORK TO ENSURE PROPER SURFACE DRAINAGE WHILE MAINTAINING EROSION AND SEDIMENT CONTROL AS DEFINED BY TOWN SPECIFICATIONS AND DESIGN DRAWINGS.
5. WHEN ACTIVITIES TEMPORARILY CEASE DURING CONSTRUCTION, SOIL STOCKPILES AND EXPOSED SOIL SHOULD BE STABILIZED BY SEED AND MULCH OR OTHER APPROPRIATE MEASURES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED.
6. NOTIFY SEDIMENT CONTROL INSPECTOR AND OBTAIN APPROVAL BEFORE PROCEEDING FURTHER.
7. SITE PREPARATION AND CONSTRUCTION SHALL NOT ADVERSELY AFFECT THE FREE FLOW OF STORM RUNOFF OR WATER COURSES.
8. UPON COMPLETION OF PAVEMENT AND UTILITY INSTALLATION, RESTORATION SHALL COMMENCE.
9. EROSION AND SEDIMENT CONTROLS ARE TO BE REMOVED AS THEIR USEFULNESS DIMINISH. AT ALL INSTANCES, NOTIFY THE SEDIMENT CONTROL INSPECTOR AND OBTAIN WRITTEN APPROVAL BEFORE REMOVAL OF ANY EROSION AND SEDIMENT CONTROL DEVICE OR MECHANISM.

**EROSION CONTROL LEGEND:**

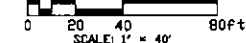
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CLEARING LIMITS
- FILTER FABRIC INLET PROTECTION
- SILT FENCE
- SWALE OUTLET SEDIMENT TRAP
- STORM INLET PROTECTOR
- SWALE INLET SEDIMENT TRAP
- EXIST. UTILITY POLE W/IGUY POST
- EXIST. VERIZON CABLE MARKER
- EXIST. BOLLARD
- EXIST. DROP INLET
- EXIST. HYDRANT
- EXIST. WATER SERVICE BOX
- EXIST. GAS METER
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED PIPE (SELECT FILL REQUIRED)
- EXISTING WATERLINE
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING OVERHEAD WIRE (POWER)
- EXISTING COMMUNICATIONS CABLE
- PROPOSED HEAVY DUTY ASPHALT AREA
- PROPOSED REGULAR DUTY ASPHALT AREA
- PROPOSED CONTOUR LINE
- EXISTING CONTOUR LINE
- PROPOSED SPOT ELEVATION
- PROPOSED CATCH BASIN
- PROPOSED WALL LIGHT (BY OTHERS)



**C1 GRADING AND DRAINAGE PLAN**  
SCALE: 1" = 40 FT

**GENERAL NOTES:**

1. ALL UTILITIES TO BE FIELD VERIFIED PRIOR TO THE START OF CONSTRUCTION.
2. SURVEY PREPARED BY NUSSBAUMER AND CLARKE, JUNE, 2017.



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**REGULATORY REVIEW  
NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS**  
280 ELLICOTT ROAD, AURORA NY

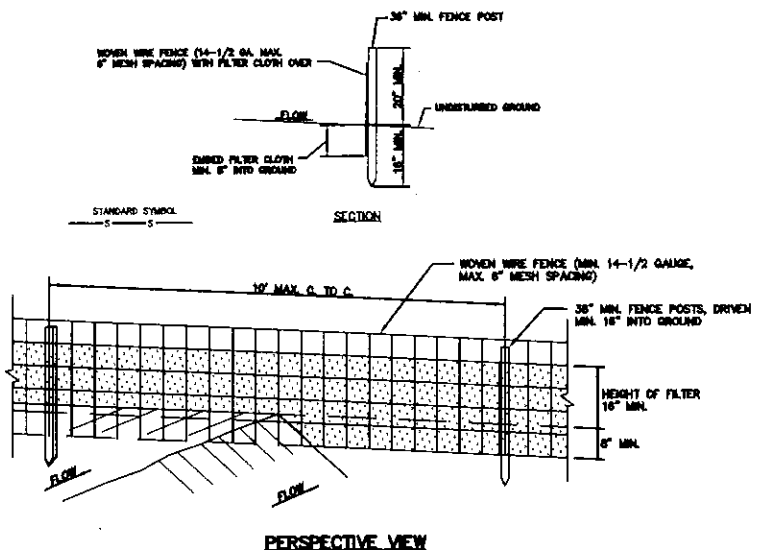
**EROSION AND SEDIMENT  
CONTROL PLAN**

| REVISIONS |             |      |
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| No.       | DESCRIPTION | DATE |
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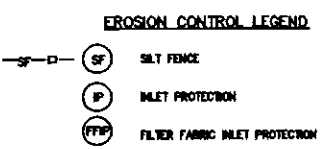
|                |           |
|----------------|-----------|
| PROJECT NUMBER | 17J5-0030 |
| DATE           | 06-16-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AMG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
|                |           |
| SHEET No.      | 10 OF 16  |
| <b>C-109</b>   |           |



**CONSTRUCTION SPECIFICATIONS**

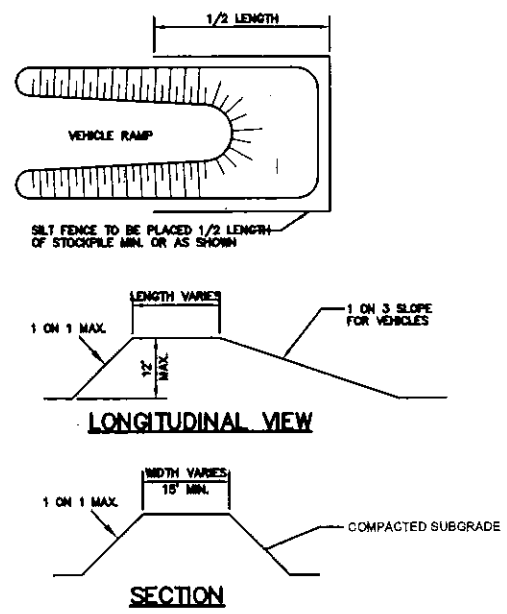
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
  - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
  - WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- POSTS:**  
STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD.
- FENCE:**  
WOVEN WIRE, 14-1/2 GA. 6" MAX. MESH OPENING
- FILTER CLOTH:**  
FILTER X, MIRAFL 100X, STABILINKA T140N OR APPROVED EQUAL
- PREFABRICATED UNIT:**  
GEOFAB, ENVROFENCE, OR APPROVED EQUAL

**4 SILT FENCE DETAILS**  
SCALE: NOT TO SCALE

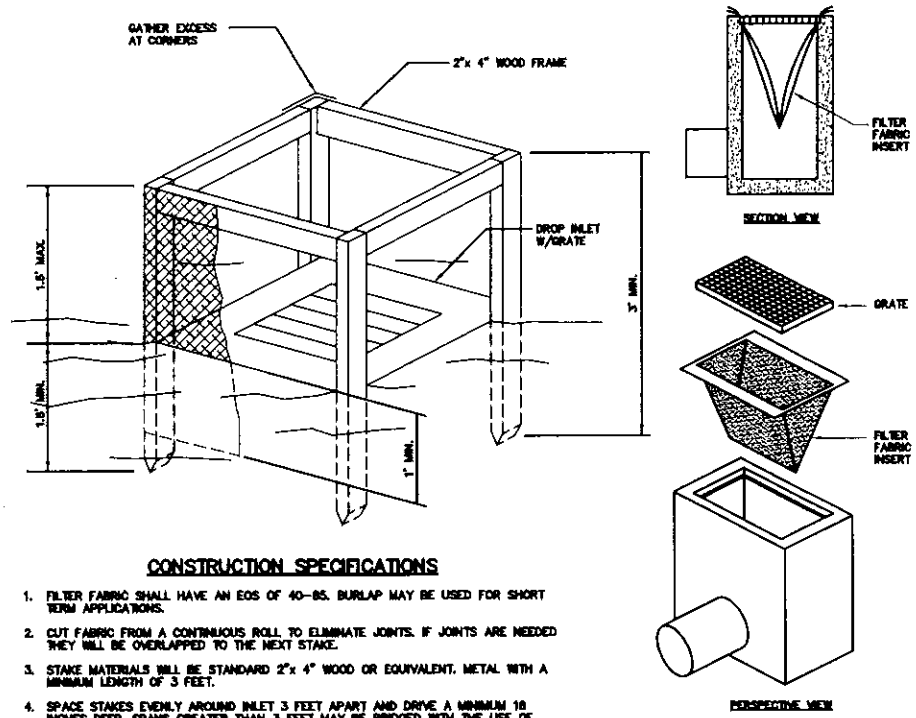


- EROSION CONTROL NOTES**
- ALL DISTURBED AREAS TO BE GRADED, TOPSOILED AND SEEDED AND MULCHED.
  - TEMPORARY STOCKPILE LOCATIONS TO BE APPROVED BY THE TOWN.
  - CLEARING SHALL BE LIMITED TO THE PHASE THAT IS CURRENTLY UNDER DEVELOPMENT. NO CLEARING SHALL TAKE PLACE BEYOND WHAT IS NECESSARY TO INSTALL UTILITIES.
  - A COPY OF THE WEEKLY SITE INSPECTION REPORT IS TO BE PROVIDED TO THE TOWN IF REQUIRED.
  - REMOVAL OF TOPSOIL FROM SITE WILL REQUIRE A PERMIT FROM THE TOWN CODE ENFORCEMENT OFFICER.

- GENERAL NOTES**
- UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THIS INFORMATION VERIFIED AND LOCATED PRIOR TO CONSTRUCTION.
  - WHERE EXISTING UTILITIES ARE REQUIRED TO BE RELOCATED, THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY CONCERNED REGARDING SUCH RELOCATION. THE COST FOR RELOCATION OF UTILITIES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR PIPE, INSTALLATION AND TRENCHING.
  - ALL DEBRIS AND SPOIL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
  - BEFORE YOU DIG OR BLAST IN WESTERN NEW YORK CALL "DIG SAFELY NEW YORK" 716-800-9622-7962.
  - SHALE SHALL NOT BE USED AS BACKFILL MATERIAL FOR PIPE CROSSINGS OF THE PAVEMENT AND CURBS.
  - PRIOR TO SUBBASE COURSE PLACEMENT, THE SURFACE ON WHICH THE SUBBASE IS TO BE PLACED SHALL BE THOROUGHLY COMPACTED TO THE 95% PROCTOR DENSITY AND PROOF ROLLED. PROOF ROLLING SHALL BE IN ACCORDANCE WITH SECTION 203-3.02C OF THE NYSDOT STANDARD SPECIFICATIONS.
  - THE PARKING LOT SHALL BE STRIPED AS SHOWN ON THE PLAN.
  - A NYSDOT HIGHWAY WORK PERMIT IS REQUIRED FOR ANY WORK WITHIN THE STATE R.O.W.



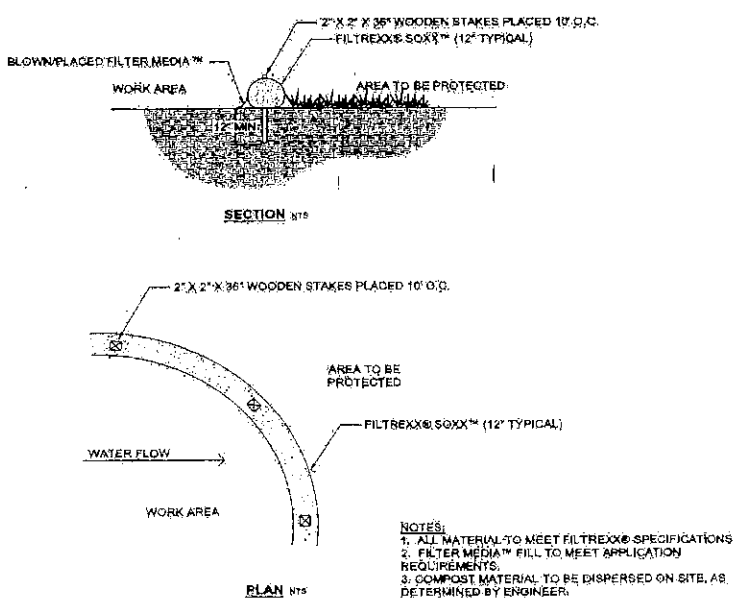
**1 TOPSOIL STOCKPILE DETAILS**  
SCALE: NOT TO SCALE



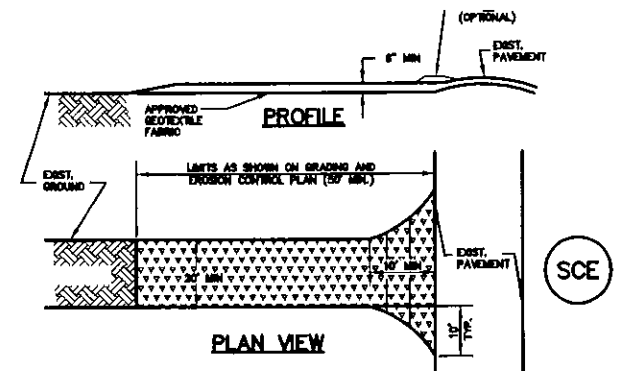
**CONSTRUCTION SPECIFICATIONS**

- FILTER FABRIC SHALL HAVE AN EGS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
  - CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
  - STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT, METAL WITH A MINIMUM LENGTH OF 3 FEET.
  - SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
  - FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
  - A 2"x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
- MAXIMUM DRAINAGE AREA 1 ACRE

**5 FILTER FABRIC DROP INLET PROTECTION DETAIL**  
SCALE: NOT TO SCALE

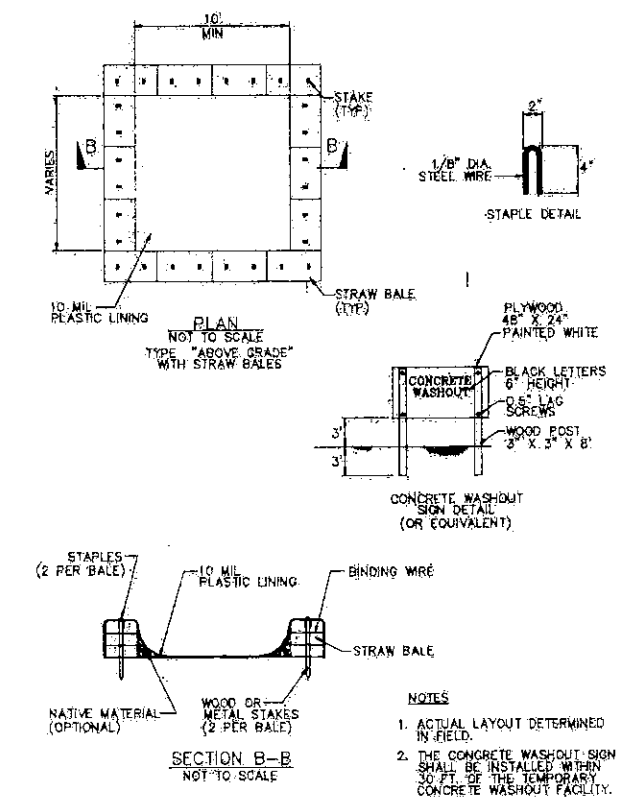


**2 FILTREXX® SEDIMENT CONTROL**  
SCALE: NOT TO SCALE



- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQ'D, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQ'D ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 1:5 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQ'D, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

**6 STABILIZED CONSTRUCTION ENTRANCE DETAILS**  
SCALE: NOT TO SCALE



**3 CONCRETE TRUCK WASHOUT DETAIL**  
SCALE: NOT TO SCALE

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REGULATORY REVIEW  
NOT FOR CONSTRUCTION

**FIVE STAR EQUIPMENT - PROPOSED BUILDING AND SITE IMPROVEMENTS**  
4781 CAMP ROAD, HAMBURG, NY

**EROSION & SEDIMENT CONTROL DETAILS**

**REVISIONS**

| No. | DESCRIPTION | DATE |
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PROJECT NUMBER 17J5-0090

DATE 08-18-17

DRAWN BY TJB

DESIGNED BY TJB

CHECKED BY AHG

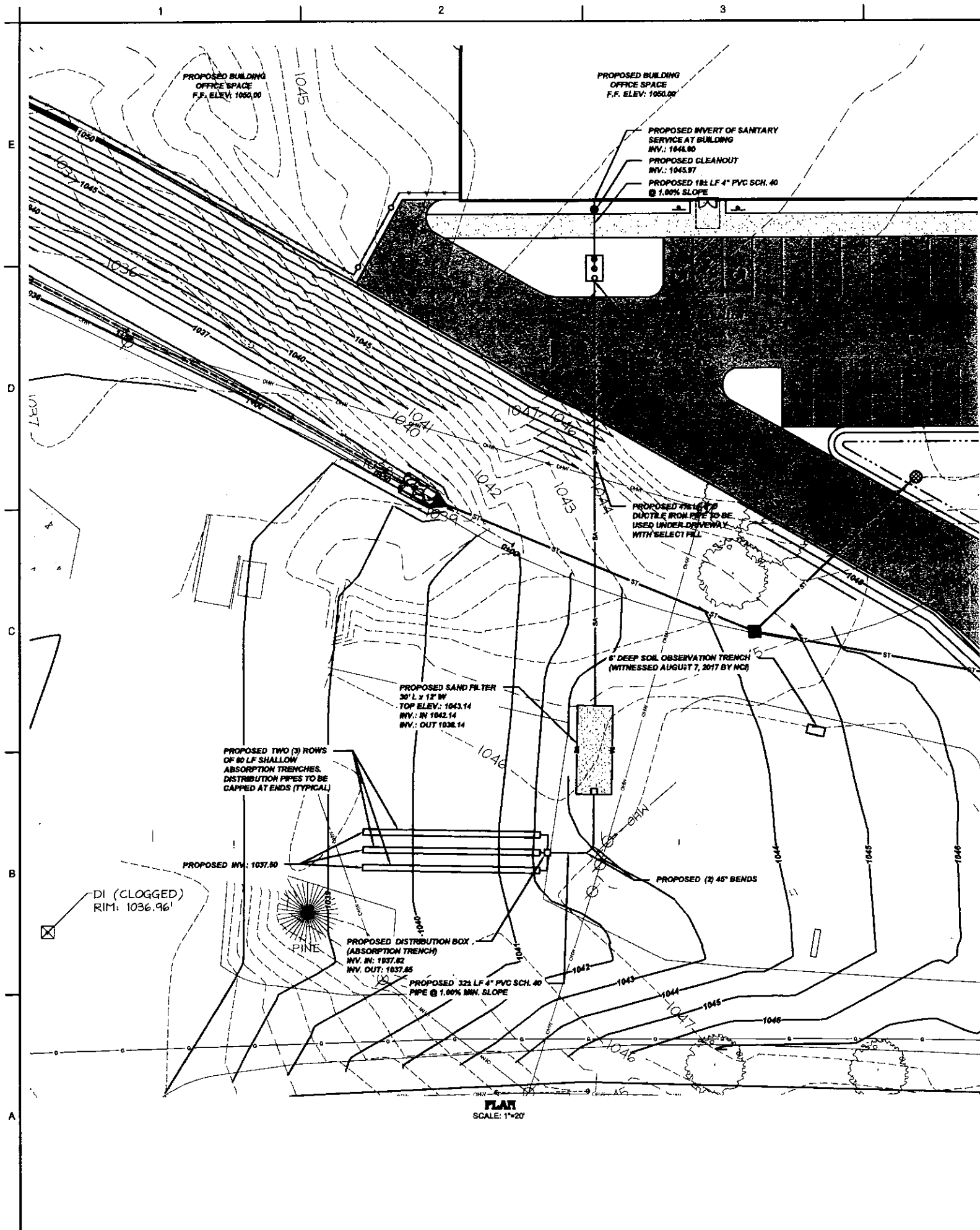
APPROVED BY

SCALE: AS NOTED

1" = 1" INCH

SHEET No. 11 OF 16

**C-110**



**SEPTIC DESIGN INFORMATION AND NOTES:**

- DESIGN FOR OFFICE BUILDING.
- DESIGN FLOW = 180 gpd (BASED ON FIXTURE COUNT).
- CONFORM WITH ALL REQUIREMENTS OF THE COUNTY HEALTH DEPT., NYS DEPARTMENT OF HEALTH AND BUILDING CODES.
- DESIGN HYDRAULIC APPLICATION RATE FOR SAND FILTER = 1.2 GPD/FT.
- DESIGN HYDRAULIC APPLICATION RATE FOR DOWNSTREAM ABSORPTION TRENCH = 1.20 GPD/FT.

**SEPTIC CONSTRUCTION SPECIFICATIONS:**

- NOTIFY ENGINEER FIVE DAYS BEFORE START OF CONSTRUCTION.
- CONTACT UTILITY LOCATING SERVICE (1-800-882-7882) PRIOR TO EXCAVATION.
- ALL PRECAST CONCRETE TO BE 4000 PSI AT 28 DAYS.
- ALL TANKS TO HAVE 6" OF SAND OR CRUSHED STONE BENEATH BASE.
- WATER TIGHT SEALS REQUIRED ON ALL CONNECTIONS. TANKS AND BOXES TO BE WATER TIGHT.
- OVERLAY GEOTEXTILE SEAMS A MINIMUM OF 2 FEET.
- HEAVY EQUIPMENT SHALL NOT ENTER THE ABSORPTION AREA.
- TOPSOIL OVER SEPTIC TANK (8" MIN., 12" MAX.).
- ALL CHANGES IN DIRECTION OF PIPE USE 45 DEGREE ANGLES TO PREVENT CLOGGING AND FACILITATE CLEANING.
- PIPE FROM SEPTIC TANK TO DISTRIBUTION BOX IS TO BE SCHEDULE 40 PVC PIPE.
- VEGETATION IN ABSORPTION AREA SHALL NOT BE SCRAPPED AWAY.
- ALL TREES WITHIN 20' OF ANY PORTION OF THE SYSTEM SHALL BE REMOVED.
- VERIFY PROPERTY LINES BEFORE CONSTRUCTION AND KEEP ALL PORTIONS AT LEAST 10' FROM PROPERTY LINES.
- THE ABSORPTION AREA SHALL BE BLOWN UPHILL TO A DEPTH OF 7' TO 8'.
- SAND IS TO BE PLACED FROM ONE SIDE TO THE OTHER TO PREVENT COMPACTION OF PLOWED SOILS.
- PROTECT ALL EXCAVATIONS AND TANKS FROM UNAUTHORIZED OR UNSAFE ENTRY.
- CONTOURS SHOWN ARE 1' INTERVALS.
- CONTRACTOR TO CONDUCT A PHYSICAL TOPOGRAPHIC SURVEY TO DETERMINE THE EXACT ELEVATIONS IN THE FIELD.
- A LINER WILL BE REQUIRED FOR THE SAND FILTER.

**DISTRIBUTION BOX (Sand Filter & Absorption Trenches):**

- INSTALL MINIMUM 3 OUTLET DISTRIBUTION BOX.
- INSTALL KISTNER MODEL DB-5 OR EQUAL.
- PLACE 12" OF CRUSHED STONE BENEATH BASE.
- PROPERLY INSTALL SPEED LEVELERS TO ENSURE EQUAL FLOW TO EACH LINE.
- INSTALL CLEANOUT OR VENT TO SURFACE WITHIN 2 FEET OF DISTRIBUTION BOX.

**DESIGN DATA**

DESIGN FLOW: 1 OFFICE BUILDING - FIXTURE COUNT = MIN. 180 GPD REQUIRED

**SOIL CHARACTERISTICS:**

A REVIEW OF THE EXISTING SOILS FROM THE WEBSOIL SURVEY ON JULY 21, 2017, INDICATES THAT THE SOILS ARE U<sub>c</sub> (UDORTHENTS, SMOOTHED) SOMEWHAT POORLY DRAINED, D<sub>8B</sub> (DERB SILT LOAM) SOMEWHAT POORLY DRAINED.

A PERC TEST WAS NOT CONDUCTED FOR THIS LOT. IT HAS BEEN DETERMINED THAT A SAND FILTER SYSTEM WILL BE REQUIRED FOR THIS PROJECT LOT.

A 6" DEEP x 3' WIDE SOIL OBSERVATION HOLE WAS DUG ON AUGUST 7, 2017. SOILS ARE COMPRISED OF APPROXIMATELY NO TOPSOIL, AND APPROXIMATELY 5.5' LOAMY CLAY, WITH GRAVEL AND PIECES OF BRICK AND FULL BRICKS AND STONES IN TRENCH. WATER WAS NOT FOUND IN THE TRENCH.

**PROPERTY OWNER INFORMATION:**

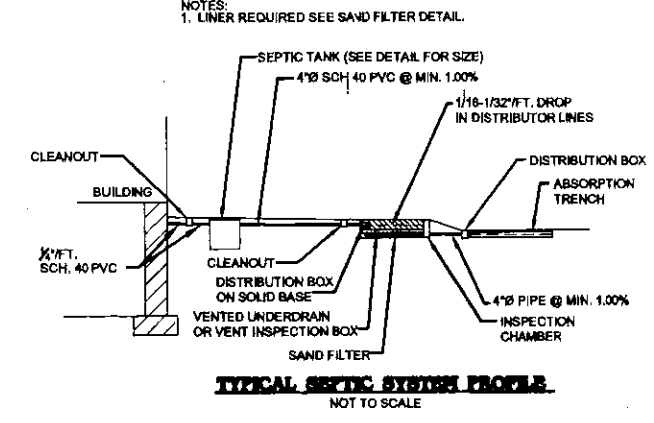
ADDRESS: 280 ELLICOTT ROAD, AURORA, NY  
OWNER: FIVE STAR EQUIPMENT  
280 ELLICOTT ROAD  
AURORA, NY 14170  
Phone: (716) 432-7308

**PREPARED BY:**

COMPANY: NUSSBAUMER & CLARKE, INC.  
ADDRESS: 3566 LAKE SHORE ROAD  
SUITE 500  
BUFFALO, NY 14219  
PHONE NO: (716) 827-8000

| FINISH FLOOR ELEV.                           | 1055.00 |
|----------------------------------------------|---------|
| ASSUMED INV. AT BUILDING                     | 1044.80 |
| DI (CLOGGED) RIM                             | 1036.96 |
| SEPTIC TANK INVERT                           | 1043.14 |
| SEPTIC TANK CLEANOUT                         | 1043.97 |
| SAND FILTER INVERT                           | 1042.14 |
| SAND FILTER CLEANOUT                         | 1038.14 |
| DISTRIBUTION BOX - IN ABSORPTION TRENCHES    | 1037.82 |
| DISTRIBUTION BOX - OUT (ABSORPTION TRENCHES) | 1037.85 |
| ABSORPTION TRENCH OUT                        | 1037.80 |
| EXIST. GRADE AT SAND FILTER                  | 1042.00 |

**PROPOSED HYDRAULIC PROFILE**



- LEGEND**
- POLE UTILITY POLE
  - HYDRANT
  - WATER VALVE
  - EXISTING CONTOUR

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Eric | Nagara | Chautauque | Delaware

**REGULATORY REVIEW  
NOT FOR CONSTRUCTION**

**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS  
280 ELLICOTT ROAD, AURORA NY**

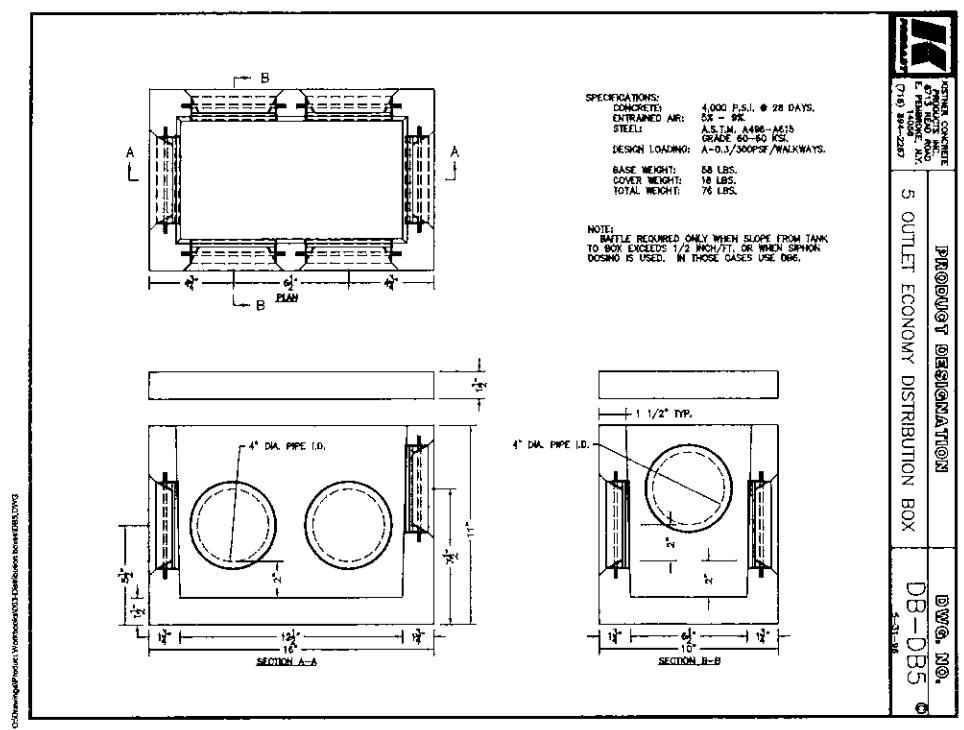
**SEPTIC SYSTEM SITE  
PLAN AND NOTES**

| REVISIONS |             |      |
|-----------|-------------|------|
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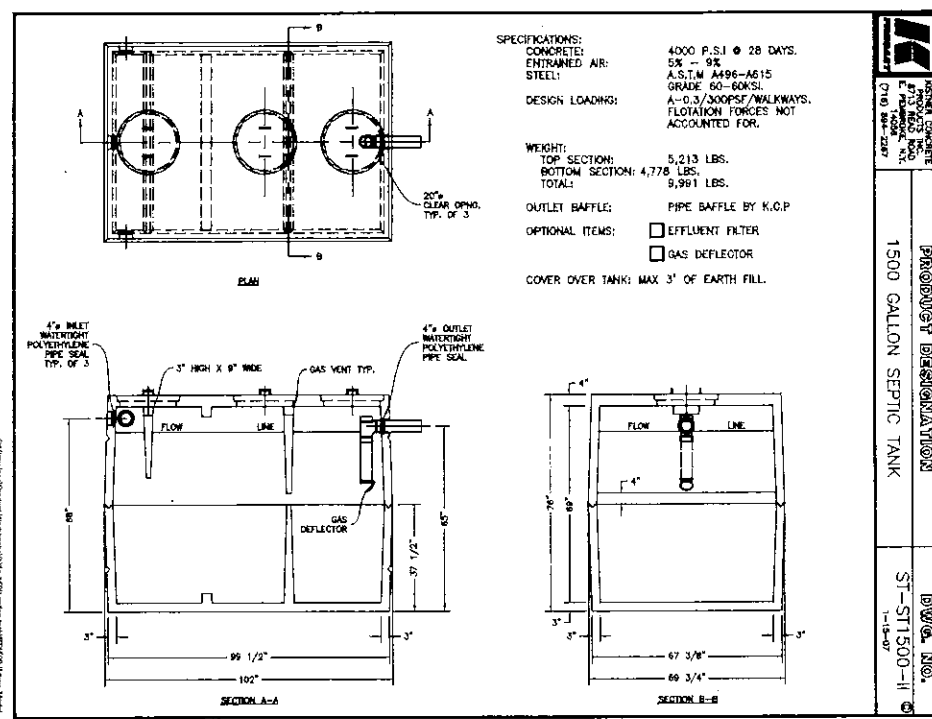
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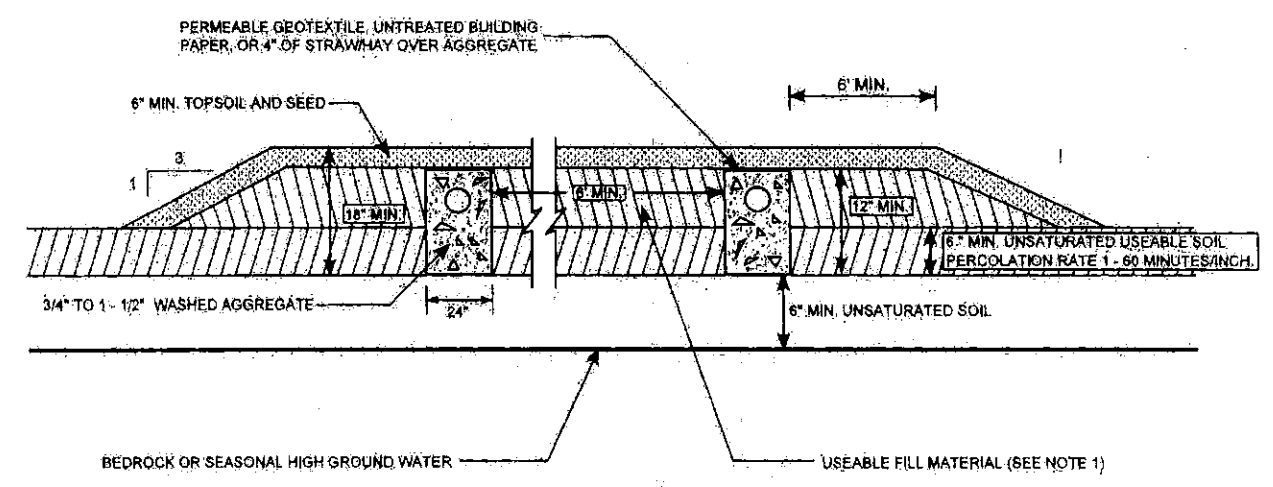
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| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-18-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | VBS       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
| 1" = 1" INCH   |           |
| SHEET No.      | 12 OF 15  |
| <b>C-111</b>   |           |



- DISTRIBUTION BOX DETAIL NOTES:**
1. INSTALL MIN. 9 OUTLET DISTRIBUTION BOX.
  2. INSTALL KISTNER MODEL DB-5 OR EQUAL (SEE DETAIL).
  3. ANY OUTLET NOT UTILIZED SHALL BE SEALED WATERTIGHT.
  4. PLACE 12" OF CRUSHED STONE BENEATH BASE.
  5. PROPERLY INSTALL SPEED LEVELERS TO ENSURE EQUAL FLOW TO EACH LINE.
  6. INSTALL VENT TO SURFACE WITHIN 2 FEET OF DISTRIBUTION BOX.



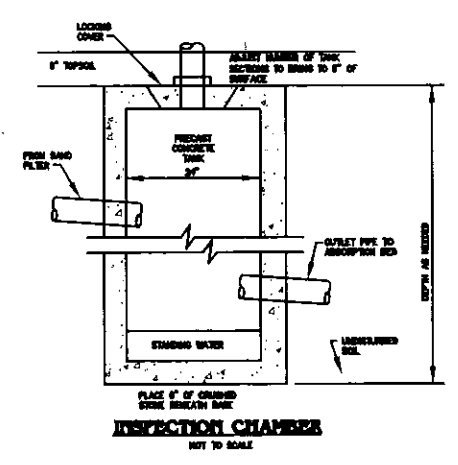
- SEPTIC TANK DETAIL NOTES:**
1. KISTNER MODEL ST 1500-N OR EQUAL.
  2. TWO COMPARTMENT 1500 GALLON TANK.
  3. INLET AND OUTLET WATER TIGHT SEALS REQUIRED.
  4. SURFACE AREA 90 FT<sup>2</sup>.
  5. INSTALL EFFLUENT FILTER IN SEPTIC TANK OUTLET.
  6. COVER SEPTIC TANK AND COVERS WITH 8" OF TOPSOIL.
  7. LOCATE TANK 10' MIN. FROM HOUSE.
  8. INSTALL CLEANOUT BETWEEN TANK AND DISTRIBUTION BOX.



- NOTES:**
1. Sufficient soil similar to the in situ permeable soil shall be provided to assure a trench depth of at least 18 inches with a minimum one (1) foot depth of aggregate filled sidewall contacting permeable soil and at least 6 inches of aggregate filled sidewall in the permeable in situ soil.
  2. Trenches shall be located at least 20 feet from drainage ditches.
  3. Trenches should be as long as possible to minimize parallel trenches.
  4. Distributor length shall not exceed 80 feet for gravity flow and 100 feet for pressure distribution.

**FIGURE 35: DOWNSTREAM "MODIFIED" SHALLOW ABSORPTION TRENCH SYSTEM**

**SHALLOW ABSORPTION TRENCH**  
NOT TO SCALE



**INSPECTION CHAMBER**  
NOT TO SCALE

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**FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS**  
280 ELLICOTT ROAD, AURORA NY  
**SEPTIC SYSTEM DETAILS 1**

| REVISIONS |             |      |
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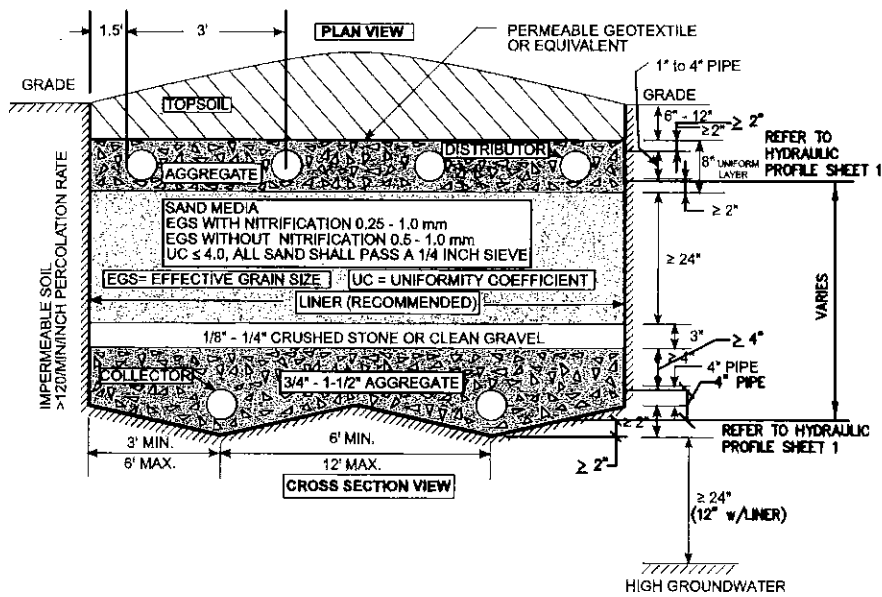
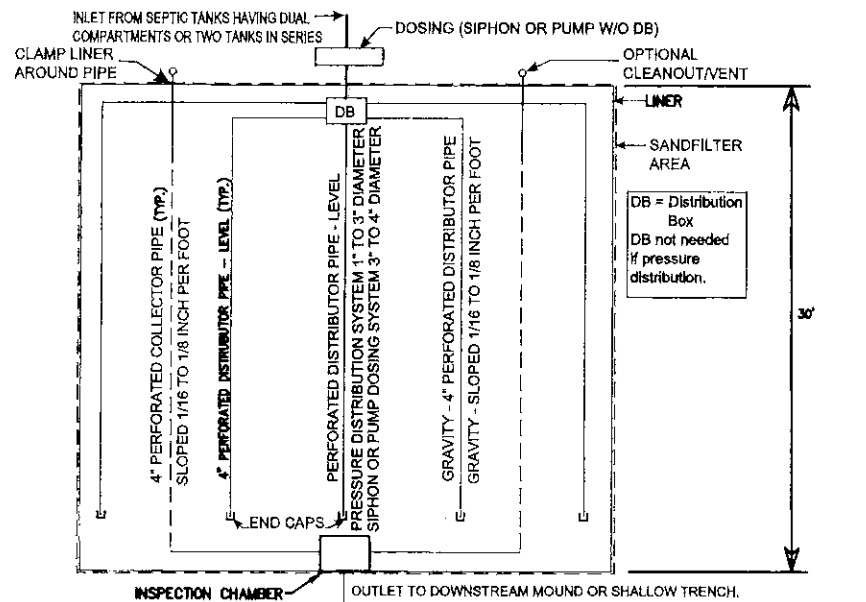
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| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-18-17  |
| DRAWN BY       | VBS       |
| DESIGNED BY    | VBS       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
|                |           |
| SHEET No.      | 13 OF 15  |
| <b>C-112</b>   |           |

17J5-0030 - the size equipment/venting drawings/Details C-110 SANITARY SEWER & SEPTIC SYSTEMS 8/17/2017 13:01:10





**NOTES:**

1. Collector lines to be centered between distributor lines.
2. Gravity distribution may be used to apply effluent to small filters having less than 300 lineal feet of distributor or less than 900 square feet of filter area.

**TYPICAL SAND FILTER DETAIL**

NOT TO SCALE

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REGULATORY REVIEW  
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FIVE STAR EQUIPMENT - PROPOSED  
BUILDING AND SITE IMPROVEMENTS  
280 ELLICOTT ROAD, AURORA NY  
SEPTIC SYSTEM DETAILS 2

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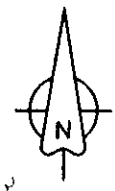
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| PROJECT NUMBER | 17J5-0030 |
| DATE           | 08-18-17  |
| DRAWN BY       | VBS       |
| DESIGNED BY    | VBS       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
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| SHEET No.      | 14 OF 16  |

C-113

H:\land development\17J5-0030 - five star equipment\working drawings\Discipline C-CHA C-110 SANITARY SEWER & SEPTIC SYSTEM.dwg 8/17/2017 10:05 AM

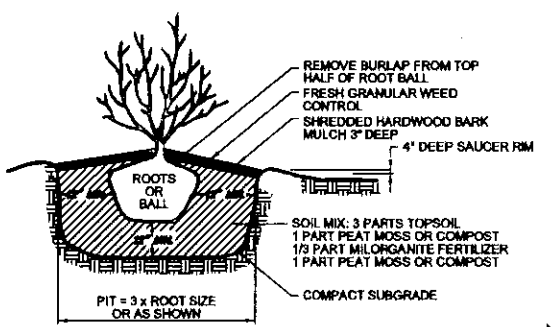
| PLANTING SCHEDULE |          |                                             |                                |              |           |
|-------------------|----------|---------------------------------------------|--------------------------------|--------------|-----------|
| TREES AND SHRUBS  |          |                                             |                                |              |           |
| KEY               | QUANTITY | BOTANICAL NAME                              | COMMON NAME                    | MINIMUM SIZE | REMARKS   |
| AA                | 2        | AMELANCHIER GRANDIFLORA "AUTUMN BRILLIANCE" | AUTUMN BRILLIANCE SERVICEBERRY | 2" CAL.      | TREE FORM |
| AK                | 14       | ACER RUBRUM "KARPICK"                       | KARPICK RED MAPLE              | 2 1/2" CAL.  |           |
| AR                | 15       | ACER RUBRUM "RED SUNSET"                    | RED SUNSET MAPLE               | 2 1/2" CAL.  |           |
| GT                | 4        | GLEDITSIA TRIACANTHOS INTERMIS "SKYLINE"    | SKYLINE HONEYLOCUST            | 2 1/2" CAL.  |           |
| JO                | 14       | JUNIPERUS CHINENSIS "OLD GOLD"              | OLD GOLD JUNIPER               | 18"-24"      |           |
| JS                | 22       | JUNIPERUS CHINENSIS "SEA GREEN"             | SEA GREEN JUNIPER              | 18"-24"      |           |
| PG                | 10       | PICEA GLAUCA                                | WHITE SPRUCE                   | 5' HGT.      |           |
| QR                | 5        | QUERCUS RUBRA                               | RED OAK                        | 2 1/2" CAL.  |           |
| SG                | 5        | SPRAEA BUMALDA "GOLD FLAME"                 | GOLD FLAME SPIREA              | 18"-24"      |           |



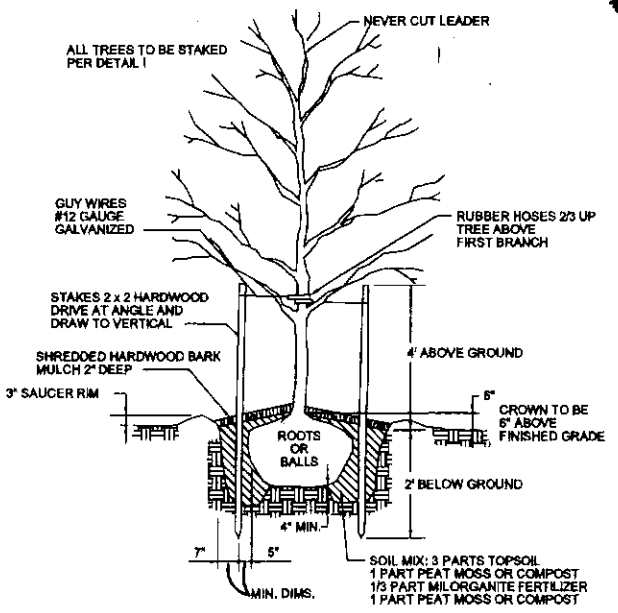
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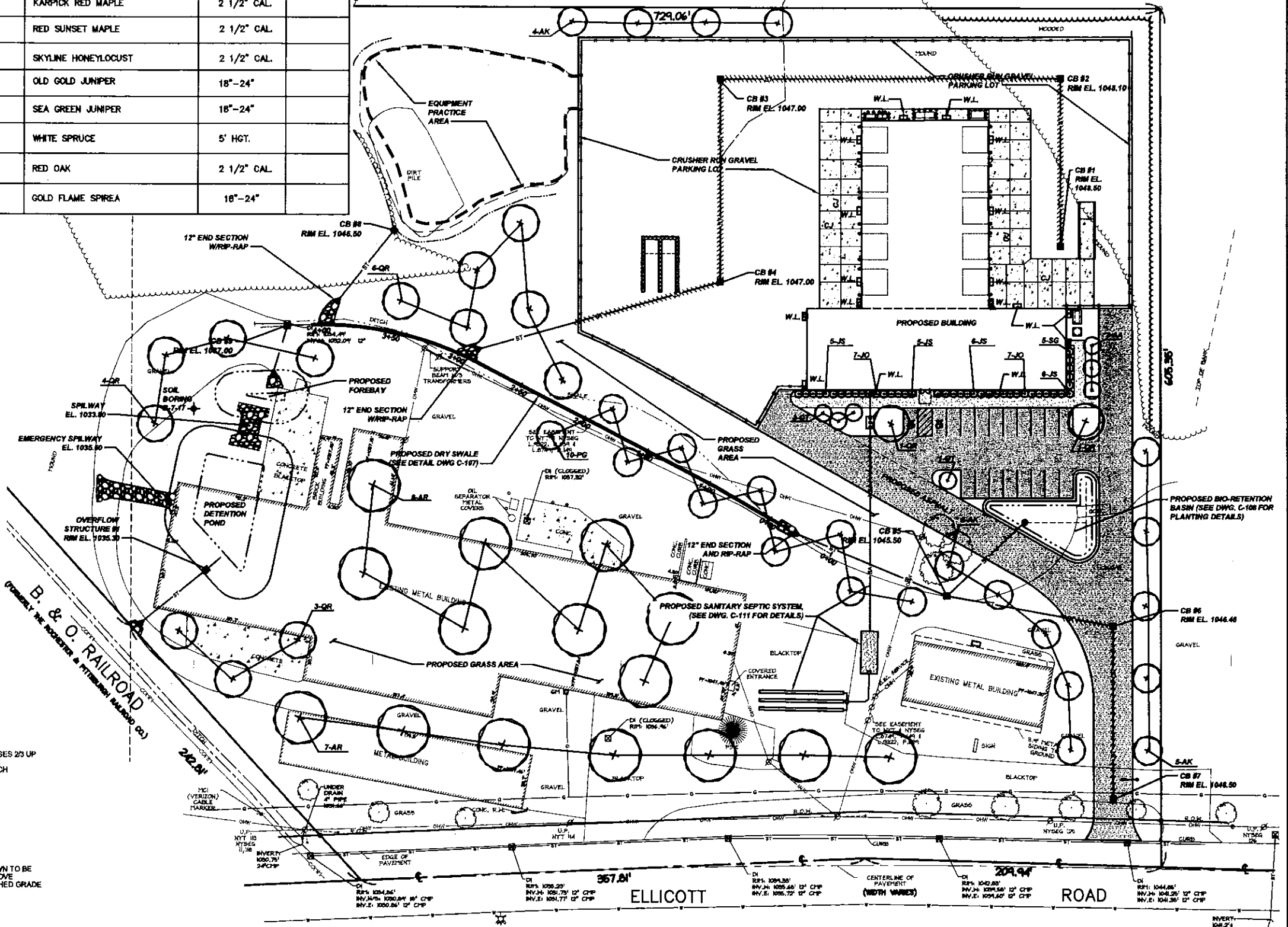
**FIVE STAR EQUIPMENT - PROPOSED  
 BUILDING AND SITE IMPROVEMENTS**  
 280 ELLICOTT ROAD, AURORA NY  
**LANDSCAPE PLAN**



**3 SHRUB PLANTING DETAIL**  
 SCALE: NO SCALE



**1 DECIDUOUS TREE PLANTING**  
 SCALE: NO SCALE



**2 LANDSCAPE PLAN**  
 SCALE: 1" = 40 FT

**GENERAL NOTES:**

- ALL UTILITIES TO BE FIELD VERIFIED PRIOR TO THE START OF CONSTRUCTION.
- SURVEY PREPARED BY NUSSBAUMER AND CLARKE, JUNE, 2017.

| REVISIONS |             |      |
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| PROJECT NUMBER | 17J5-0030 |
| DATE           | 06-16-17  |
| DRAWN BY       | TJB       |
| DESIGNED BY    | TJB       |
| CHECKED BY     | AHG       |
| APPROVED BY    | -         |
| SCALE:         | AS NOTED  |
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| SHEET No.      | 15 OF 15  |
| <b>C-114</b>   |           |