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LYNCHBURG REGIONAL AIRPORT

4308 WARDS ROAD
SUITE 100
LYNCHBURG, VA 24502

AIR TRAFFIC CONTROL TOWER

REVISIONS

NO.	DESCRIPTION	DATE
△1	ADDENDUM NO. 1	9/16/15

DATE ISSUED: AUGUST 12, 2015
REVIEWED BY: NJP
DRAWN BY: SPC
DESIGNED BY: SPC

AEP PROJECT NUMBER
222-0264-001

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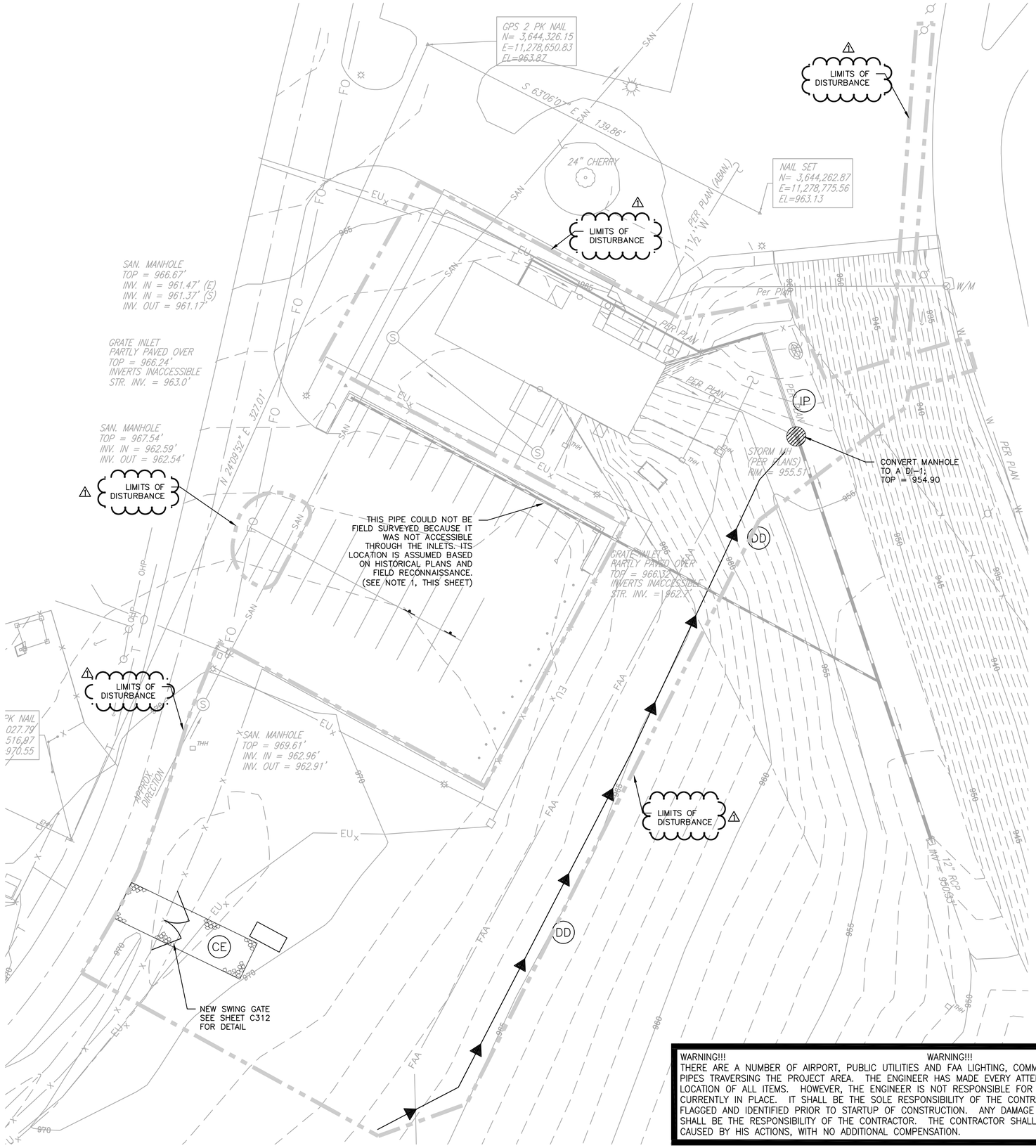
SHEET TITLE

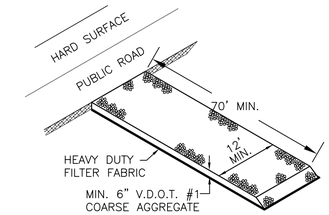
INDEX OF SHEETS

SHEET NUMBER

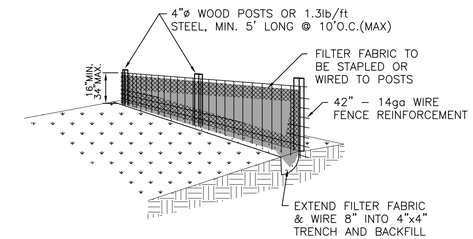
C002

BID DOCUMENTS

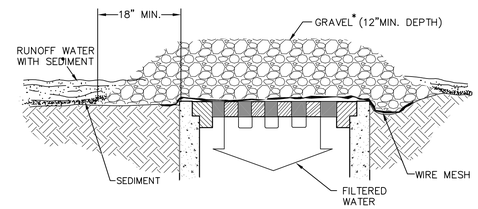




TEMPORARY
CONSTRUCTION ENTRANCE (CE)
VESHC STD. 3.02
N.T.S.



(SF) SILT FENCE
(WITH WIRE SUPPORT)
N.T.S.



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

PLATE. 3.07-2
SOURCE: VA. DSWC

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

GRAVEL AND WIRE MESH
DROP INLET SEDIMENT FILTER (IP)
VESHC STD. 3.07
N.T.S.

NOTES:
1. DYE TESTING IN JUNE 2015 CONFIRMED LOCATION AND FLOW OF EXISTING PIPES NOT FIELD SURVEYED.

NORTH
N

SCALE: 1"= 20'
20' 10' 0 20'

WARNING!!! WARNING!!! WARNING!!!
THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE PROJECT AREA. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

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COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
Lic. No. 041801
9/14/15
PROFESSIONAL ENGINEER

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	9/14/15

DATE ISSUED: AUGUST 12, 2015
REVIEWED BY: BLC
DRAWN BY: WCH
DESIGNED BY: PSB
AEP PROJECT NUMBER
222-0264-001

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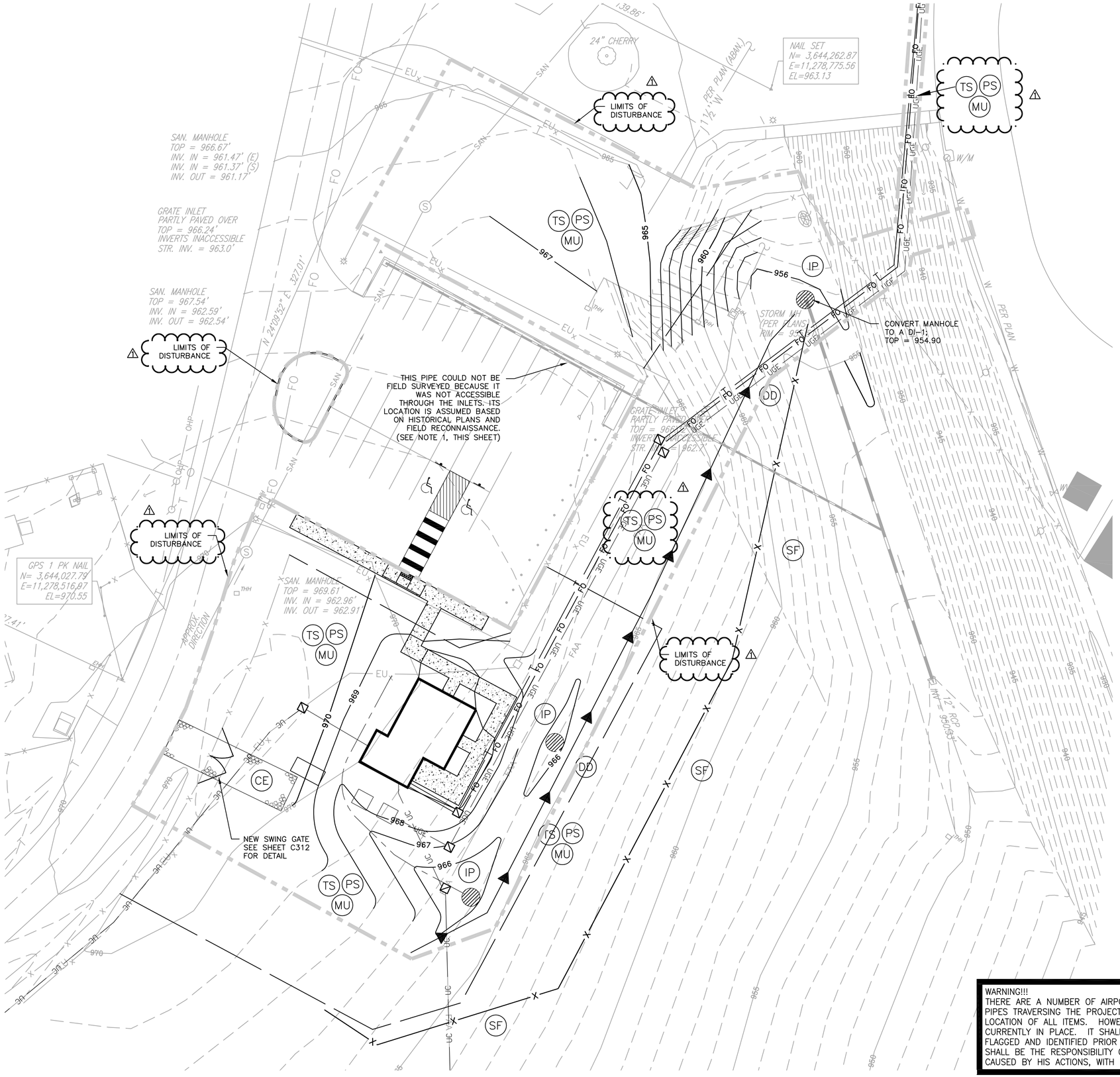
SHEET TITLE
PHASE 1 EROSION AND SEDIMENT CONTROL

SHEET NUMBER
C101

BID DOCUMENTS



NORTH

SCALE: 1"= 20'

20' 10' 0 20'

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REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	9/14/15

DATE ISSUED: AUGUST 12, 2015
REVIEWED BY: BLC
DRAWN BY: WCH
DESIGNED BY: PSB

AEP PROJECT NUMBER
222-0264-001

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SHEET TITLE

PHASE 2 EROSION AND SEDIMENT CONTROL

SHEET NUMBER

C102

BID DOCUMENTS

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW TRAFFIC CONTROL TOWER BUILDING, WATER AND SANITARY SEWER SERVICE LINES, FENCING, PEDESTRIAN IMPROVEMENTS, A STORMWATER MANAGEMENT SYSTEM, AND OTHER APPURTENANCES AT THE LYNCHBURG REGIONAL AIRPORT. THE SITE IS LOCATED ON HANGAR ROAD. THE EXISTING CONTROL TOWER WILL BE DEMOLISHED FOLLOWING CONSTRUCTION OF THE NEW TOWER. THE TOTAL AREA TO BE DISTURBED BY THE PROJECT IS APPROXIMATELY 0.96 ACRES.

EXISTING SITE CONDITIONS

THE SITE IS THE EXISTING CONTROL TOWER FOR THE LYNCHBURG REGIONAL AIRPORT. THE SITE IS OPEN AND HAS AN EXISTING BUILDING ON THE NORTH. RUNOFF GENERALLY FLOWS FROM WEST TO EAST, TOWARD THE RUNWAYS. THERE ARE CURRENTLY NO STORMWATER MANAGEMENT MEASURES IN PLACE.

ADJACENT PROPERTY

THE PROJECT AREA IS ADJACENT TO AND EAST OF HANGAR ROAD, NEAR ITS INTERSECTION WITH AIRPORT ROAD, WEST OF THE AIRPORT RUNWAY, NORTH OF AN OPEN FIELD AND RUNWAY, AND SOUTH OF AIRPORT SUPPORT BUILDINGS.

CRITICAL AREAS

NO CRITICAL AREAS HAVE BEEN IDENTIFIED FOR THE SITE.

OFFSITE AREAS

ALL GRADING SHALL OCCUR ON SITE. ANY ADDITIONAL BORROW OR WASTED SOIL FROM THE SITE WILL BE EITHER STOCKPILED ON SITE OR REMOVED TO A LOCATION CHOSEN BY THE CONTRACTOR AT A LATER DATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT A SITE PLAN IS SUBMITTED FOR APPROVAL FOR ANY BORROW OR FILL AREAS LOCATED OFF SITE.

SOILS

THE SOIL SURVEY MAP FOR LYNCHBURG SHOWS THE SITE TO BE MAINLY COMPRISED OF URBAN LAND. SLOPES ARE 2% TO 6% IN THE PROJECT AREA.

STORMWATER

THE DISTURBED AREA FOR THE SITE IS LESS THAN ONE (1) ACRE SO A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT IS NOT REQUIRED. HOWEVER, CAMPBELL COUNTY'S ORDINANCE INDICATES THAT IF A PROJECT IS LESS THAN ONE (1) ACRE AND VSMP PERMIT COVERAGE IS NOT REQUIRED, THE PROJECT IS STILL SUBJECT TO THE TECHNICAL CRITERIA OF SECTION 2B OF THE VIRGINIA STORMWATER MANAGEMENT REGULATIONS. THEREFORE, MANAGEMENT OF STORMWATER QUALITY AND QUANTITY IS REQUIRED USING THE RUNOFF REDUCTION METHOD AND ENERGY BALANCE EQUATION.

DEVELOPMENT OF THE NEW TOWER INCLUDES THE DEMOLITION OF THE EXISTING TOWER, RESULTING IN A REDUCTION IN THE AMOUNT OF IMPERVIOUS AREA ON THE SITE. THE EXISTING SITE IS COMPRISED OF 0.11 ACRES OF IMPERVIOUS AREA AND 0.84 ACRES OF MANAGED TURF; THE NEW TOWER SITE HAS ONLY 0.05 ACRES OF IMPERVIOUS AREA AND 0.90 ACRES OF MANAGED TURF. THE RESULT IS A DECREASE IN IMPERVIOUS AREA OF 0.06 ACRES. THE VIRGINIA RUNOFF REDUCTION METHOD FOR REDEVELOPED SITES WAS USED FOR QUALITY CALCULATIONS AND THE TR55/SCS METHOD WAS USED FOR QUANTITY CALCULATIONS ALONG WITH THE ENERGY BALANCE EQUATION. THE RESULT IS THAT NO WATER QUALITY TREATMENT AND MINIMAL STORMWATER QUANTITY MANAGEMENT IS REQUIRED.

AN UNDERGROUND PIPE STORAGE SYSTEM WAS CHOSEN TO CONTROL THE QUANTITY OF WATER TO MEET THE ENERGY BALANCE REQUIREMENTS. RUNOFF WILL BE PIPED TO AN EXISTING PIPE NETWORK.

EROSION AND SEDIMENT CONTROL

ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. SYMBOLS, DETAILS, AND DIMENSIONS USED ARE TAKEN FROM THE HANDBOOK, AS WELL AS THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, 2001 EDITION, VOLUME 1 OF 2.

3.02 CONSTRUCTION ENTRANCE (CE) - ONE CONSTRUCTION ENTRANCE IS PROPOSED AT THE ENTRANCE TO THE SITE, AS SHOWN ON PLANS. WHERE THE ENTRANCE IS PROPOSED IN PAVED AREAS CONTRACTOR SHALL REMOVE ALL MUD, DIRT, AND DEBRIS PRIOR TO ENTERING THE PUBLIC RIGHT OF WAY. CONTRACTOR SHALL INSTALL ADDITIONAL STONE STABILIZATION AS NECESSARY TO PREVENT TRACKING ONTO THE EXISTING ROADWAY WITHIN THE LIMITS OF CONSTRUCTION.

3.05 SILT FENCE (SF) - A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS PLACED ACROSS OR AT THE TOE OF A SLOPE OR IN A MINOR DRAINAGE WAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE. SILT FENCE SHALL BE INSTALLED ALONG THE EDGE OF PAVEMENT AT THE LIMITS OF GRADING AS SHOWN ON THE PLANS.

3.07 INLET PROTECTION (IP) - A SEDIMENT FILTER AROUND A DROP INLET OR CURB INLET TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.

3.09 TEMPORARY DIVERSION DIKE (DD) - A RIDGE OF COMPACTED SOIL WILL BE USED TO DIVERT SEDIMENT-LADEN RUNOFF TO THE SEDIMENT BASIN DURING INITIAL GRADING OPERATIONS.

VEGETATIVE MEASURES

SEEDING MEASURES SHALL BE USED ON DISTURBED SOIL AT CUT/FILL SLOPES, SIDES OF SEDIMENT BASINS, DITCH LINES, OR AREAS OUTSIDE OF ON-GOING CONSTRUCTION PRACTICES WITHIN SEVEN (7) DAYS OF COMPLETED GRADING. ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINAL GRADING.

UNLESS OTHERWISE INDICATED, ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

3.31 TEMPORARY SEEDING (TS) - THE CONTRACTOR IS TO IMPLEMENT TEMPORARY SEEDING IF DISTURBED LAND IS LEFT EXPOSED FOR OVER 30 DAYS AND CONSTRUCTION IS NOT COMPLETE IN THIS AREA.

3.32 PERMANENT SEEDING (PS) - ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER BY PLANTING SEED ON ROUGH-GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE OR WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED ON FINE-GRADED AREAS.

3.35 MULCHING (MU) - APPLICATION OF PLANT RESIDUES OR OTHER SUITABLE MATERIALS TO DISTURBED SURFACES TO PREVENT EROSION AND REDUCE OVERLAND FLOW VELOCITIES. FOSTERS PLANT GROWTH BY INCREASING AVAILABLE MOISTURE AND PROVIDING INSULATION AGAINST EXTREME HEAT OR COLD. EC-2 SHALL BE USED AS MULCHING MATERIAL FOR THIS PROJECT.

MINIMUM STANDARDS (MS):

ALL APPLICABLE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND MINIMUM STANDARDS SHALL BE ADHERED TO DURING ALL PHASES OF CONSTRUCTION. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

MS-1 STABILIZATION OF DENUDED AREAS:

PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO BARE AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE UNLESS OTHERWISE SHOWN. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT OR UNDISTURBED FOR LONGER THEN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MS-2 STABILIZATION OF SOIL STOCKPILES:

DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

MS-3 PERMANENT VEGETATIVE COVER:

A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE CITY INSPECTOR, IS UNIFORM AND MATURE ENOUGH TO SURVIVE AND INHIBIT EROSION.

MS-4 TIMING AND STABILIZATION OF SILT TRAPPING MEASURES:

SEDIMENT TRAPS, STORM DRAIN INLET PROTECTION, SILT FENCING, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY. THE STRUCTURES SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

MS-5 STABILIZATION OF EARTHEN STRUCTURES:

STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

MS-6 SEDIMENT BASINS:

A SEDIMENT BASIN SHALL CONTROL SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES. THE SEDIMENT BASIN SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE THE ANTICIPATED SEDIMENT LOADING FOR THE LAND DISTURBING ACTIVITY. THE OUTFALL DEVISE OR SYSTEM DEVICE SHALL TAKE INTO ACCOUNT THE TOTAL DRAINAGE AREA FLOWING THROUGH THE DISTURBED AREA TO BE SERVED BY THE BASIN.

MS-7 CUT AND FILL SLOPES:

CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

MS-8 CONCENTRATED RUNOFF DOWN CUT OR FILL SLOPES:

CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.

MS-9 WATER SEEPS FROM A SLOPE FACE:

WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

MS-10 STORM SEWER INLET PROTECTION:

ALL STORM SEWER INLETS SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

MS-11 STABILIZATION OF OUTLETS:

BEFORE NEWLY CONSTRUCTED STORM WATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

MS-12 WORK IN LIVE WATERCOURSES:

PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT AND SEDIMENT TRANSPORT WHEN WORKING IN LIVE WATERCOURSES. THE WORK AREA SHALL BE STABILIZED TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.

MS-13 CROSSING A LIVE WATERCOURSE:

WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX MONTH PERIOD, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIALS SHALL BE PROVIDED.

MS-14 APPLICABLE REGULATIONS:

ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

MS-15 STABILIZATION OF BED AND BANKS:

THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

MS-16 UNDERGROUND UTILITIES:

UNDERGROUND UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPEN AT ONE TIME.
B. EXCAVATED MATERIAL SHALL BE PLACE ON THE UPHILL SIDE OF TRENCHES.
C. EFFLUENT FOR DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVISE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFFSITE PROPERTY.
D. RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
E. APPLICABLE SAFETY REGULATIONS SHALL BE COMPILED WITH AT ALL TIMES.

MS-17 CONSTRUCTION ACCESS ROUTES:

WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS, AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

MS-18 TEMPORARY E&S CONTROL MEASURE REMOVAL:

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE CITY INSPECTOR.

MS-19 ADEQUACY OF RECEIVING CHANNELS:

PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE DEVELOPMENT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION, AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY, AND PEAK FLOW RATES OF STORM WATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24 HOUR DURATION.

MANAGEMENT STRATEGIES

- EROSION AND SEDIMENT CONTROL SHALL BE DISCUSSED BETWEEN THE GRADING CONTRACTOR AND THE OWNER PRIOR TO ANY EXCAVATION SO THAT LIMITS OF CONSTRUCTION AND EROSION CONTROL METHODS ARE CLEARLY UNDERSTOOD BY BOTH PARTIES.
- CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
- THERE IS TO BE NO TRACKING OF MUD OR DIRT BY CONSTRUCTION EQUIPMENT ONTO ANY PAVED DRIVES OR ROADS.
- SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING AND WILL BE SEEDED AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
- SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.
- AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
- AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E&S CONTROLS WILL BE CLEANED AND REMOVED.

MAINTENANCE

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES. THESE SHALL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL; ANY DEFICIENCIES SHALL BE REPAIRED IMMEDIATELY IN ACCORDANCE WITH THE LATEST EDITION OF THE VESCH OR AS DEEMED NECESSARY BY THE LOCAL APPROVING AUTHORITY.

CONSTRUCTION SEQUENCE

1. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE PLANS.
2. CONTRACTOR SHALL STABILIZE ALL TEMPORARY EROSION CONTROL MEASURES PRIOR TO ANY GRADING OR SITE CLEARING ACTIVITIES.
3. CLEAR AND GRUB THE SITE.
4. ROUGH GRADE THE BUILDING PAD AND WALKWAYS.
5. TEMPORARY AND PERMANENT SEEDING AND MULCHING TO BE PLACED ON ALL DISTURBED AREAS AS REQUIRED BY VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
6. CONSTRUCT CONTROL TOWER.
7. INSTALL WATER AND SEWER SERVICE PIPING.
8. INSTALL STORM PIPING AND INLET PROTECTION DEVICES.
9. CONTRACTOR TO RESTORE ALL AREAS BACK TO EITHER PROPOSED GRADES OR EXISTING CONDITIONS AFTER COMPLETION OF THE PROJECT. ALL DISTURBED AREA, HAUL ROADS, CONSTRUCTION ROADS, LAY DOWN AREA, ETC. SHALL BE RESTORED.
10. ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER FINAL STABILIZATION OF SITE HAS BEEN ACHIEVED.

EROSION AND SEDIMENT CONTROL NOTES:

E1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

E2. EXCESS EXCAVATION DISPOSED OF OFF THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

E3. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATION OF THE LATEST EDITION OF VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS A VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

E4. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED SO THAT SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.

E5. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED.

E6. PROPERTIES ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.

E7. THE DISPOSAL OF WASTE MATERIALS REMOVED FROM EROSION AND SEDIMENT CONTROL FACILITIES AND THE DISPOSAL OF THESE FACILITIES SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. SETTLED, TRAPPED, AND FILTERED RESIDUES SHALL NOT BE REUSED AT THIS SITE.

E8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERIODICALLY INSPECT ALL SEDIMENT AND EROSION CONTROL DEVICES AND INSURE THAT THEY ARE IN GOOD WORKING ORDER. AT A MINIMUM, ALL DEVICES SHALL BE INSPECTED WEEKLY AND AFTER MAJOR RAINFALL EVENTS. ANY DEVICE NEEDING REPAIRS SHALL BE REPAIRED WITHIN 24 HOURS.

E9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES IF, DURING THE COURSE OF CONSTRUCTION, CITY OF LYNCHBURG DETERMINES THAT THEY ARE REQUIRED.

E10. THE PLAN APPROVING AUTHORITY, CITY ENGINEER, AND CITY E&S ADMINISTRATOR MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

E11. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

E12. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING , BUT NOT LIMITED TO, OFF SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTAL EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

E13. FAILURE TO MAINTAIN CONSTRUCTION ENTRANCES WILL RESULT IN THE INSTALLATION OF A VEHICLE WASHING FACILITY.

E14. ALL EARTHEN STRUCTURES ARE TO BE STABILIZED UPON COMPLETION.

E15. NO EROSION CONTROLS CAN BE REMOVED WITH OUT PERMISSION FROM THE CAMPBELL COUNTY E&S ADMINISTRATOR OR HIS/HER DESIGNEE.

E16. THE CAMPBELL COUNTY E&S ADMINISTRATOR OR HIS/HER DESIGNEE HAS THE AUTHORITY TO ADD OR DELETE EROSION CONTROLS ON AN AS NEEDED BASIS.

E17. ALL SILT FENCE ON SITE SHALL BE REINFORCED WITH WIRE BACKING.

SEEDING SPECIFICATIONS:

(TS) TEMPORARY SEEDING-

WINTER - 40 LBS/AC ANNUAL RYE GRASS AND
40 LBS/AC CEREALE (WINTER) RYE
SUMMER - 40 LBS/AC ANNUAL RYE AND 40 LBS/AC FOXTAIL MILLET

FERTILIZER - 1500 LBS. 10-18-10/ACRE
LIME - 2 TONS/ACRE

(PS) PERMANENT SEEDING-

SEASONAL SPECIFICATION - PER ACRE

O2/01 THRU 05/15 100 LBS. TALL FESCUE
2 LBS. RED CLOVER
15 LBS. ANNUAL RYE

05/16 THRU 07/31 120 LBS. TALL FESCUE
2 LBS. RED CLOVER
10 LBS. FOXTAIL MILLET

08/01 THRU 09/15 100 LBS. TALL FESCUE
2 LBS. RED CLOVER
15 LBS. ANNUAL RYE

09/16 THRU 01/31 120 LBS. TALL FESCUE
2 LBS. RED CLOVER
10 LBS. CEREALE RYE

FERTILIZER - ALL SEASONS - 1500 LBS. 10-18-10/ACRE
LIME - ALL SEASONS - 2 TONS/ACRE

(MU)

EROSION AND SEDIMENT CONTROL MAINTENANCE:

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CHECKED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL TO INSURE THAT ALL DEVICES ARE IN PLACE AND FUNCTIONING AS REQUIRED. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. IN GENERAL, IF THE SILT BUILT UP BEHIND A BARRIER BECOMES AS DEEP AS 9 INCHES, THE SILT IS TO BE REMOVED AND THE BARRIER REPAIRED OR REPLACED. AFTER COMPLETION OF THE PROJECT, AND PERMANENT SEEDING HAS BEEN ESTABLISHED, EROSION CONTROL DEVICES AND ANY SILT BUILT UP SHALL BE REMOVED. DISTURBED AREAS DUE TO THIS CLEANUP OPERATION SHALL BE REPAIRED, RESEEDED AND REMULCHED.

EROSION AND SEDIMENT CONTROL DEVICES:

PERIMETER EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITY. AS CONSTRUCTION PROCEEDS, ALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS SOON AS POSSIBLE. EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN ARE A MINIMUM AND THE PROJECT CONDITION MAY DICTATE ADDITIONAL CONTROL. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

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COMMONWEALTH OF VIRGINIA
P. SCOTT BEASLEY
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9/14/15
PROFESSIONAL ENGINEER

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	9/14/15

DATE ISSUED: AUGUST 12, 2015
REVIEWED BY: BLC
DRAWN BY: WCH
DESIGNED BY: PSB

AEP PROJECT NUMBER
222-0264-001

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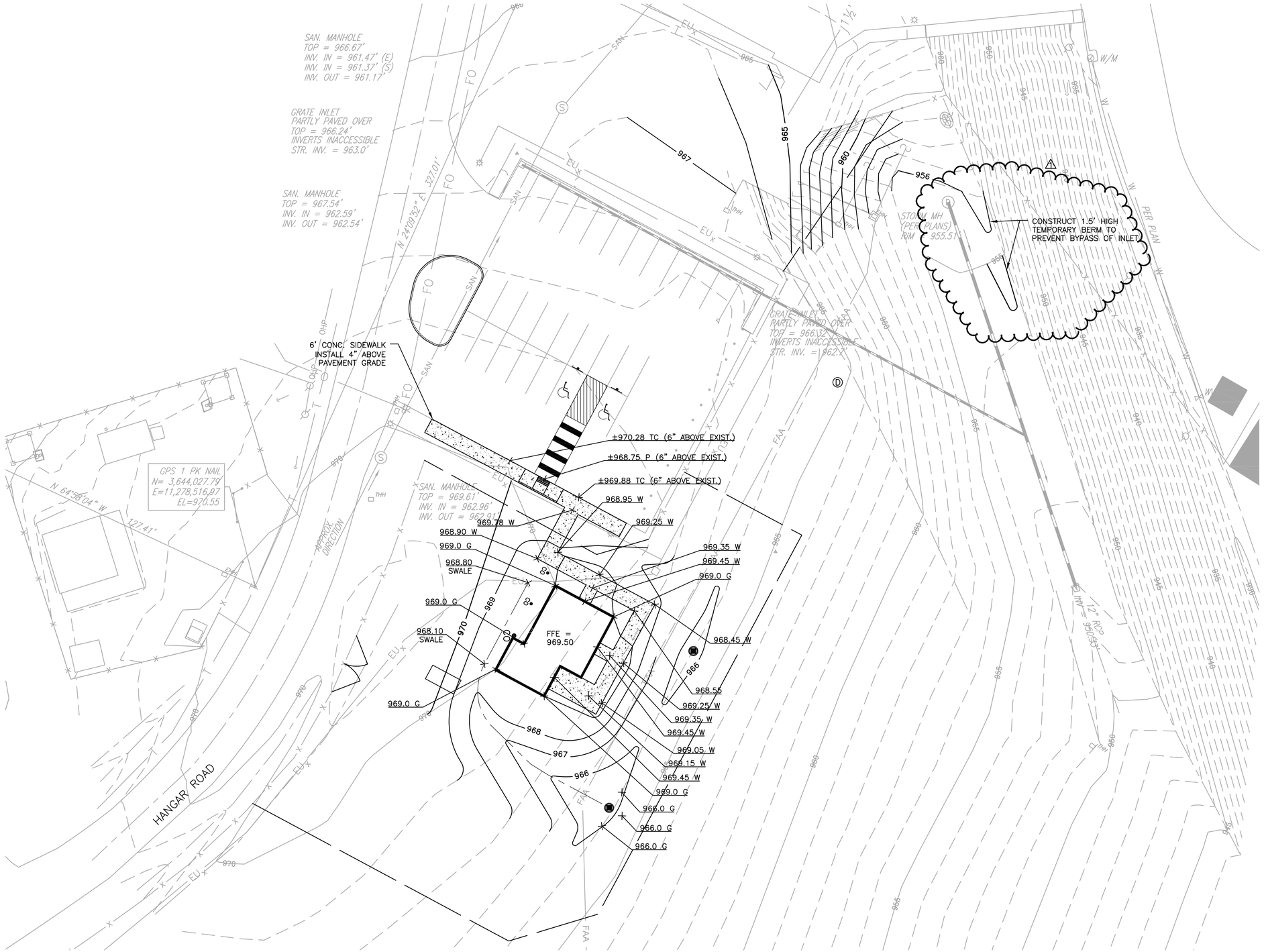
SHEET TITLE

EROSION AND SEDIMENT CONTROL NOTES & DETAILS

SHEET NUMBER

C103

BID DOCUMENTS



NOTES

1. SEE SHEET C200 FOR DEMOLITION PLAN.
2. SEE SHEET C401 FOR UTILITY PLAN AND PROFILE.
3. SEE SHEET C601 FOR ELECTRICAL SITE PLAN.
4. CONTRACTOR SHALL RESTORE EXISTING TOWER AREA WITH BACKFILL PER GEOTECHNICAL RECOMMENDATIONS, 4" TOPSOIL AND SEED AND MULCH.

LEGEND

- PROPOSED SIDEWALK PAVEMENT
- PROPOSED AOA FENCE
- SAN — PROPOSED SANITARY SEWER
- W — PROPOSED WATER MAIN
- PROPOSED STORM SEWER
- (D) PROPOSED DRAINAGE MANHOLE
- PROPOSED DRAINAGE INLET

NORTH

SCALE: 1"= 20'

20' 10' 0 20'

WARNING!!! WARNING!!! WARNING!!!
THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE PROJECT AREA. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

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REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	9/14/15

DATE ISSUED: AUGUST 12, 2015
REVIEWED BY: BLC
DRAWN BY: WCH
DESIGNED BY: PSB

AEP PROJECT NUMBER
222-0264-001

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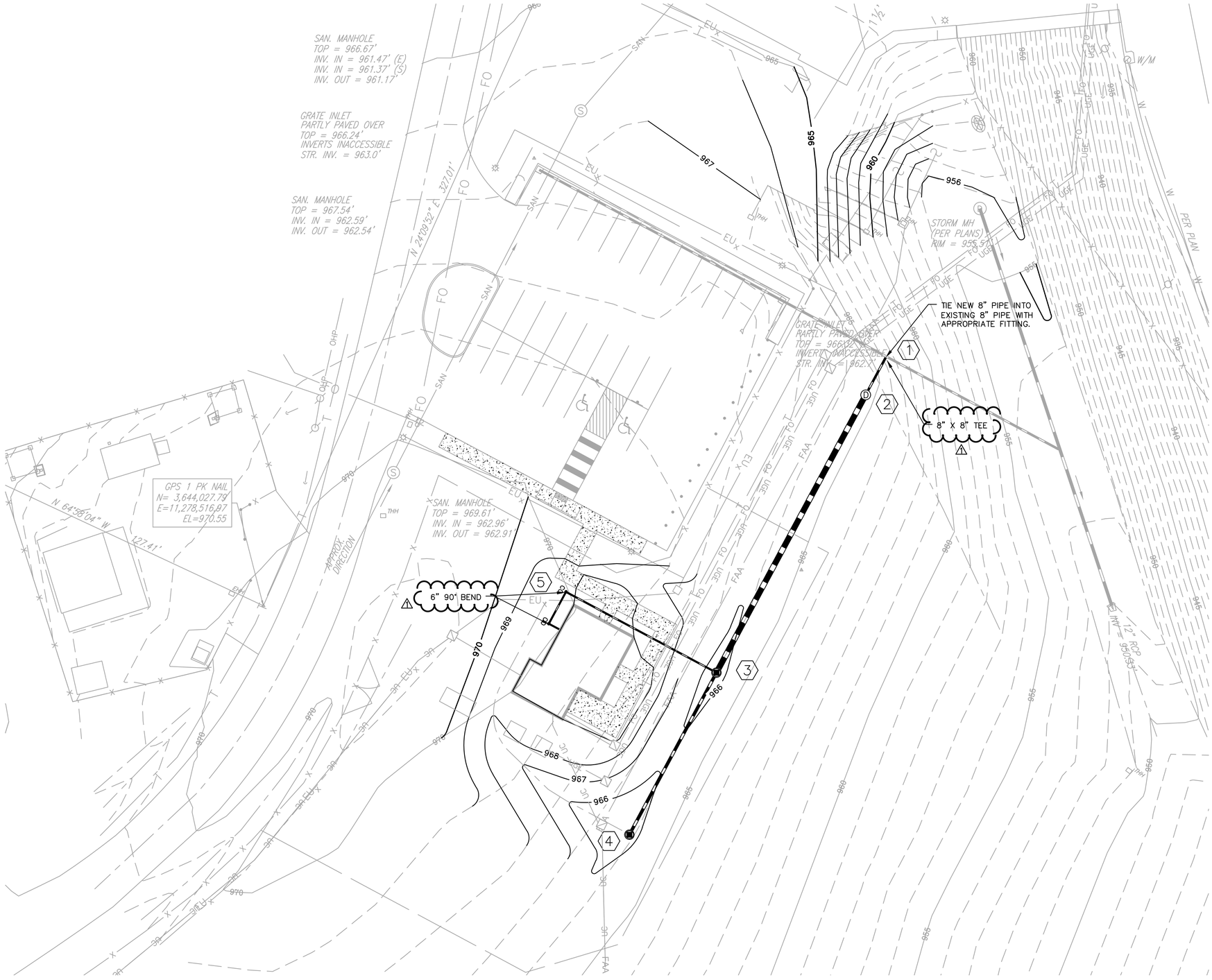
SHEET TITLE

PROPOSED GRADING PLAN

SHEET NUMBER

C302

BID DOCUMENTS



NOTES

1. SEE SHEET C200 FOR DEMOLITION PLAN.
2. SEE SHEET C401 FOR UTILITY PLAN AND PROFILE.
3. SEE SHEET C601 FOR ELECTRICAL SITE PLAN.
4. CONTRACTOR SHALL RESTORE EXISTING TOWER AREA WITH BACKFILL PER GEOTECHNICAL RECOMMENDATIONS, 4" TOPSOIL AND SEED AND MULCH.

STRUCTURE TABLE

1	CONNECT TO EXISTING
2	VDOT MH–1 TOP = 965.2 INV = 959.50 (24" HDPE IN) INV = 959.50 (8" HDPE OUT–CONTROL ORIFICE) INV = 962.10 (8" HDPE OUT–OVERFLOW)
3	VDOT DI–1 TOP = 965.0 INV = 961.30 (12" HDPE IN) INV = 961.80 (6" PVC IN) INV = 960.10 (24" HDPE OUT)
4	VDOT DI–1 TOP = 965.00 INV = 962.00 (12" HDPE OUT)
5	CLEANOUT TOP = 968.9 INV = 964.40 (6" PVC)

PIPE TABLE

1–2	16LF± – 8" HDPE @ 2.0% (MIN.)
2–3	120LF – 24" HDPE @ 0.5%
3–4	70LF – 12" HDPE @ 1.0%
3–5	65LF – 6" PVC @ 4.0%

LEGEND

- PROPOSED SIDEWALK PAVEMENT
- PROPOSED AOA FENCE
- SAN — PROPOSED SANITARY SEWER
- W — PROPOSED WATER MAIN
- PROPOSED STORM SEWER
- PROPOSED DRAINAGE MANHOLE
- PROPOSED DRAINAGE INLET

NORTH

SCALE: 1"= 20'

20' 10' 0 20'

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REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	9/14/15

DATE ISSUED: AUGUST 12, 2015
REVIEWED BY: BLC
DRAWN BY: WCH
DESIGNED BY: PSB

AEP PROJECT NUMBER
222-0264-001

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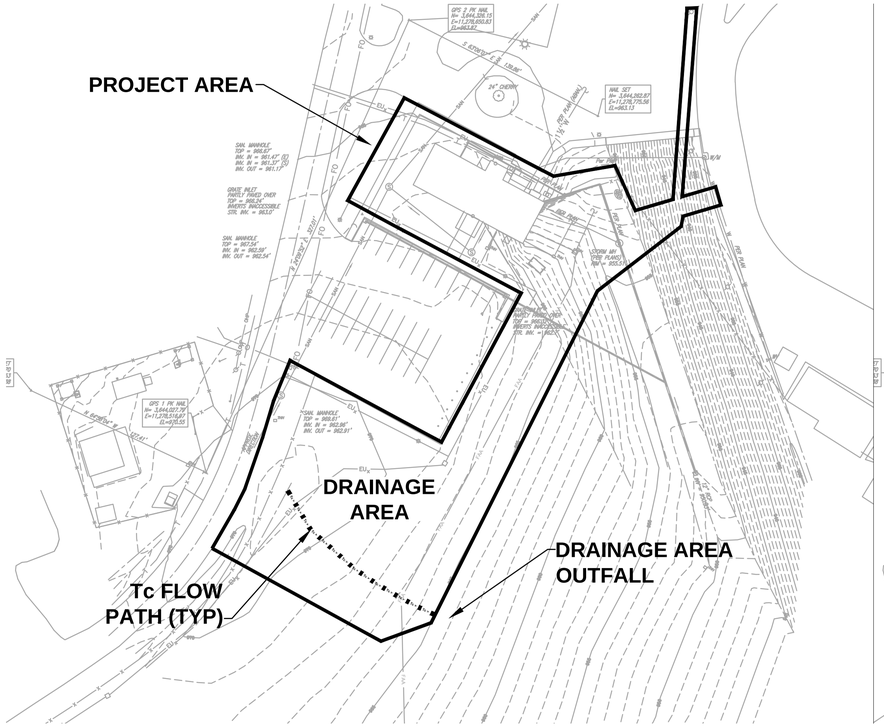
SHEET TITLE

STORMWATER PLAN

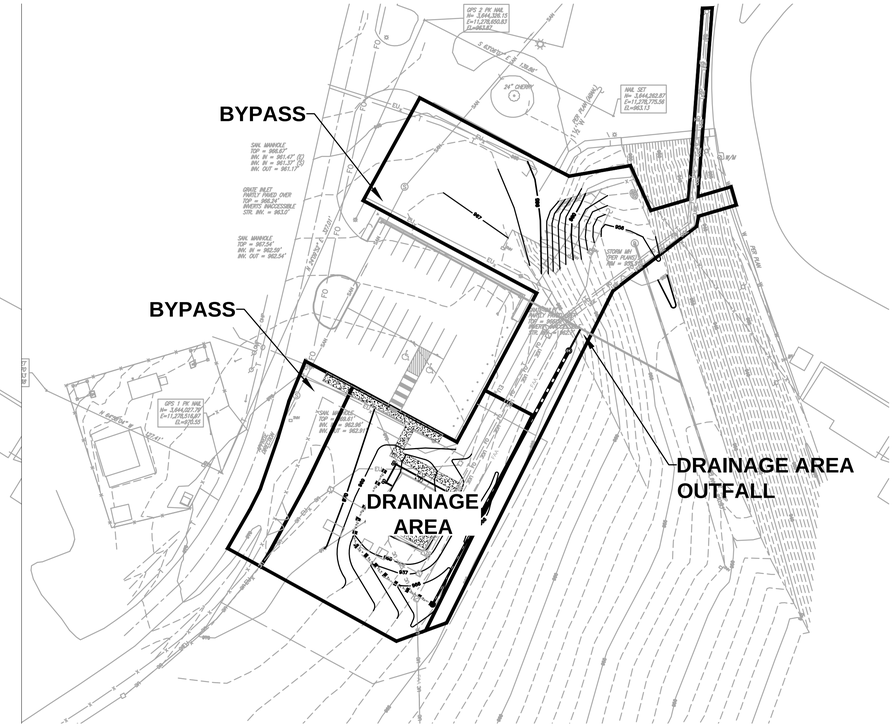
SHEET NUMBER

C321

BID DOCUMENTS



PRE-DEVELOPED DRAINAGE AREA MAP



POST-DEVELOPED DRAINAGE AREA MAP

Pre-developed Drainage Area Calculations		
Total Area	AC	0.96
Impervious Area (CN=98)	AC	0.11
Pervious Area (CN=80)	AC	0.85
Weighted Curve Number		82
Time of Concentration	MIN	5
Design Flow (1-YR)	CFS	**2.2**
Design Flow (2-YR)	CFS	**2.9**
Design Flow (10-YR)	CFS	**5.4**

Post-Developed Drainage Area Calculations				
Drainage Area ID		**To Storage**	**Bypass**	**Total**
Total Area	AC	0.40	0.56	0.96
Impervious Area (CN=98)	AC	0.05	0.00	0.05
Pervious Area (CN=80)	AC	0.34	0.56	0.90
Weighted Curve Number		82	80	81
Time of Concentration	MIN	5	5	
Design Flow (1-YR)	CFS	0.9	1.2	
Design Flow (2-YR)	CFS	1.2	1.5	
Design Flow (10-YR)	CFS	2.2	3.0	
Routed Flow (1-YR)	**CFS**	**2.0**		
Routed Flow (2-YR)	**CFS**	**2.7**		
Routed Flow (10-YR)	**CFS**	**4.9**		

Channel Protection Compliance (1-Year Storm)		
Disturbed Area	AC	1.0
Improvement Factor		**0.9**
1-Year Rainfall (P)	IN	2.8
Pre-developed Area	AC	0.96
Pre-developed CN		82
Pre-developed S	IN	2.20
Pre-developed Runoff Depth	IN	1.22
Pre-developed Flow	CFS	**2.2**
Pre-developed Volume	CF	**4,264**
Post-developed Area	AC	0.96
Post-developed CN		81
Post-developed S	IN	2.35
Post-developed Runoff Depth	IN	1.16
Post-developed Volume	CF	**4,036**
Allowable Flow	**CFS**	**2.1**
Post-developed Flow	**CFS**	**2.0**

Flood Protection Compliance (10-Year Storm)		
Pre-developed Flow	**CFS**	**5.4**
Post-developed Flow	**CFS**	**4.9**

WARNING!!! WARNING!!! WARNING!!!
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NORTH

SCALE: 1"= 50'
50' 25' 0 50'

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9/14/15
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REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	9/14/15

DATE ISSUED: **AUGUST 12, 2015**
REVIEWED BY: **BLC**
DRAWN BY: **WCH**
DESIGNED BY: **PSB**

AEP PROJECT NUMBER
222-0264-001

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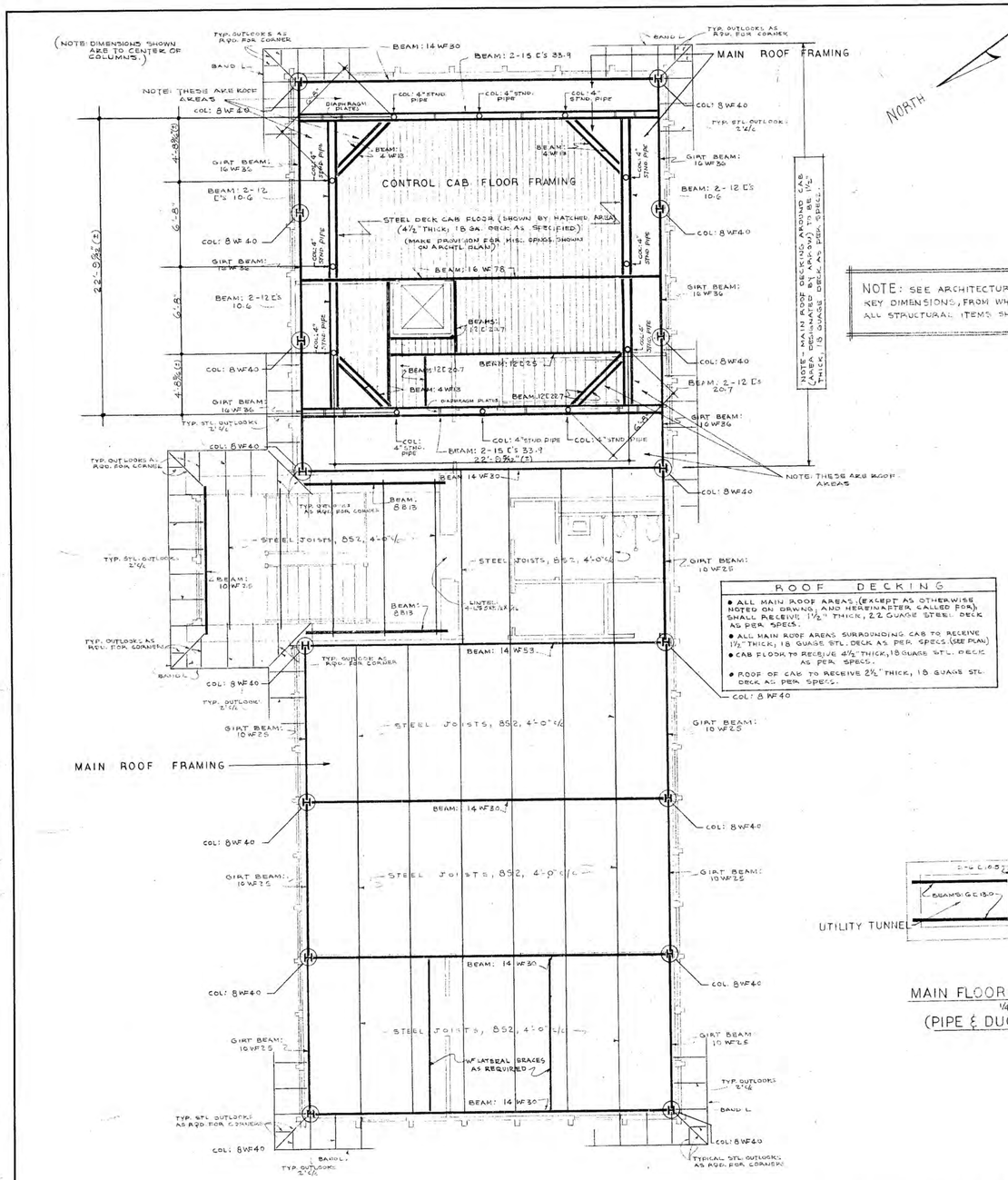
SHEET TITLE

DRAINAGE DIVIDE MAP

SHEET NUMBER

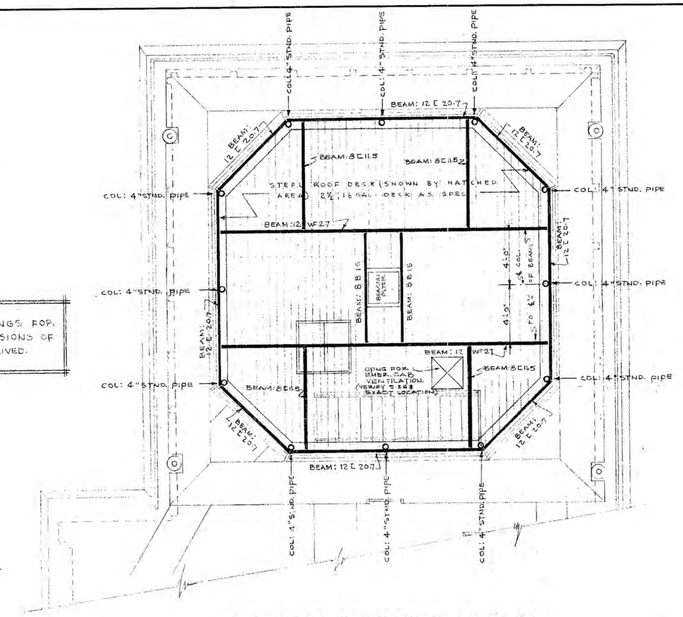
C322

BID DOCUMENTS



MAIN ROOF FRAMING PLAN ¼"=1'-0"

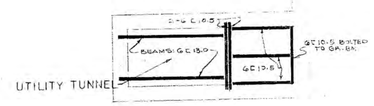
NOTE: SEE ARCHITECTURAL DRAWINGS FOR KEY DIMENSIONS, FROM WHICH, DIMENSIONS OF ALL STRUCTURAL ITEMS SHALL BE DERIVED.



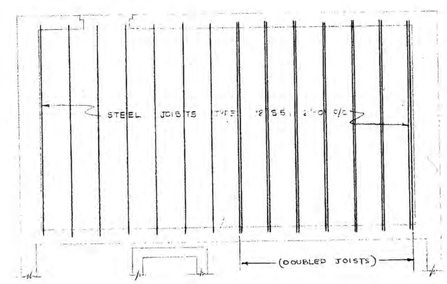
CAB ROOF FRAMING PLAN ¼"=1'-0"

ROOF DECKING

- ALL MAIN ROOF AREAS (EXCEPT AS OTHERWISE NOTED ON DRWNG. AND HEREINAFTER CALLED FOR) SHALL RECEIVE 1½" THICK, 22 GUAGE STEEL DECK AS PER SPECS.
- ALL MAIN ROOF AREAS SURROUNDING CAB TO RECEIVE 1½" THICK, 18 GUAGE STL. DECK AS PER SPECS. (SEE PLAN)
- CAB FLOOR TO RECEIVE 4½" THICK, 18 GUAGE STL. DECK AS PER SPECS.
- ROOF OF CAB TO RECEIVE 2½" THICK, 18 GUAGE STL. DECK AS PER SPECS.



MAIN FLOOR FRAMING PLAN
¼"=1'-0"
(PIPE & DUCT SHAFT)



MAIN FLOOR FRAMING PLAN ¼"=1'-0"
(TRANSFORMER VAULT)

NOTE: SEE INDIVIDUAL BEAM & GIRT DETAILS ON SEPARATE SHEETS FOR MISC. ADDITIONAL MEMBERS &/OR SECTIONS IN CONJUNCTION WITH, OR ATTACHED TO, BEAMS. THE FRAMING PLANS DESIGNATE ONLY PRINCIPAL MEMBERS.

CONTROL TOWER PRESTON GLENN AIRPORT IMPROVEMENTS STAGE THREE LYNCHBURG, VIRGINIA DATE: DEC. 30, 1960 COMM. NO. 126013	FAA PROJECT NO. - 9-44-004-03 GARLAND M. GAY & ASSOCIATES ARCHITECTS LYNCHBURG VIRGINIA REVISED APRIL 10, 1961 PHS STRUCTURAL PLANS DRAWN BY PHS TRACED BY CHECKED BY PHS	SHEET NO. 10

DRWNGS REVISED TO INDICATE "AS-BUILT" CONDITIONS MARCH 1964

N-70

NOTE:
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4308 WARDS ROAD
SUITE 100
LYNCHBURG, VA
24502

AIR TRAFFIC CONTROL TOWER

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	AUGUST 12, 2015
REVIEWED BY:	RLM
DRAWN BY:	ARJ/WAJ
DESIGNED BY:	ARJ

AEC PROJECT NUMBER
222-0264-001

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SHEET TITLE
AS-BUILTS, 10, STRUCTURAL PLANS

SHEET NUMBER
C-AB-011

BID DOCUMENTS