

# BELLA TERRA P.U.D. - PHASE 1 ROAD AND DRAINAGE IMPROVEMENTS

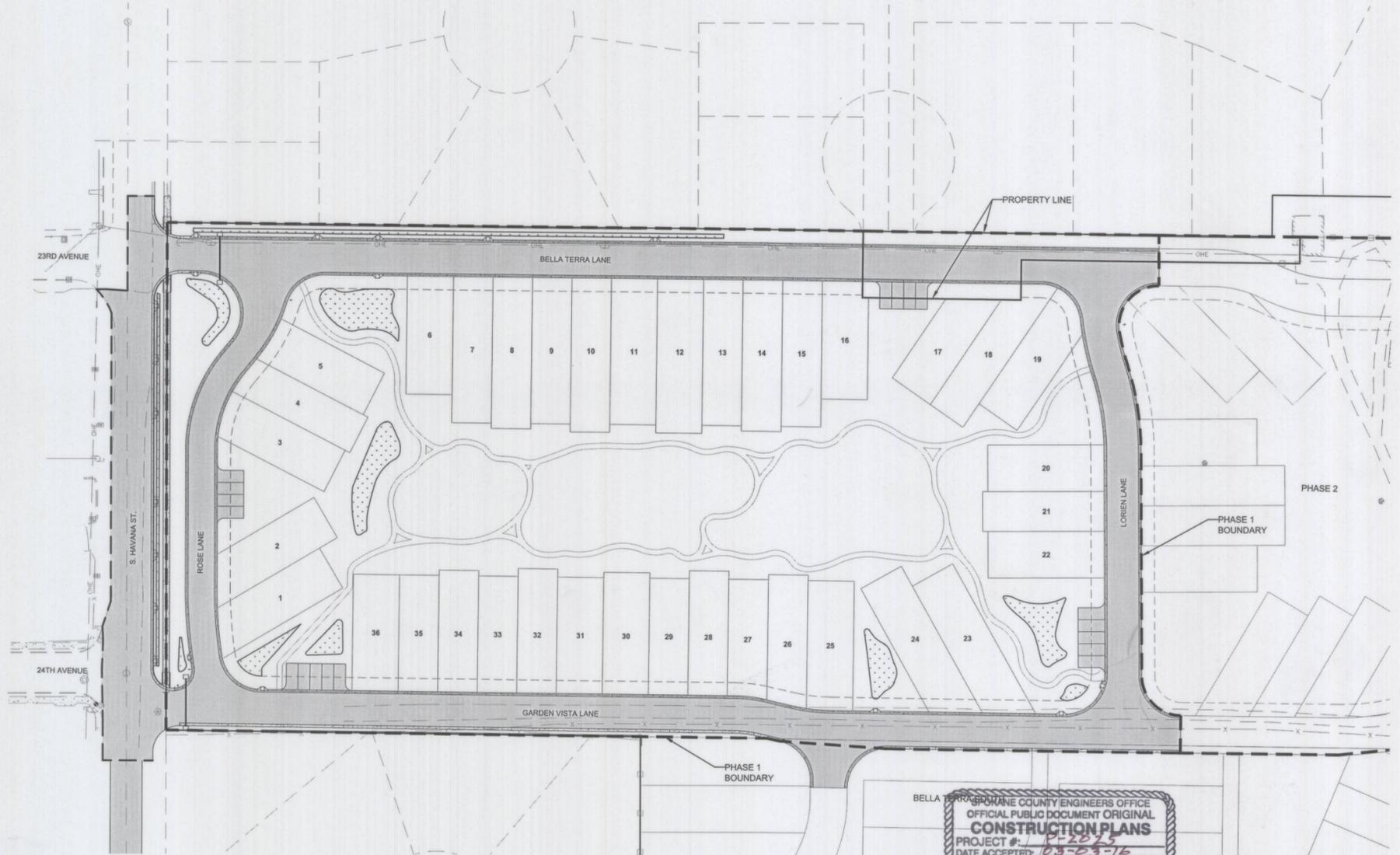
A PORTION OF SECTION 26, T.25N., R.43E., W.M., SPOKANE COUNTY, WASHINGTON

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## VICINITY MAP

SCALE: NTS



### TBM INFORMATION

- SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-2318.63

### SURVEY COORDINATES

- SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.

THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.

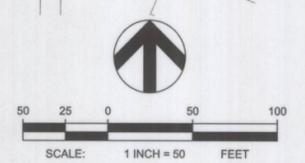
THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.



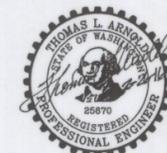
Know what's below.  
Call before you dig.

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

BELLA TERRA P.U.D. SPOKANE COUNTY ENGINEERS OFFICE  
OFFICIAL PUBLIC DOCUMENT ORIGINAL  
**CONSTRUCTION PLANS**  
PROJECT #: 15-2015  
DATE ACCEPTED: 05-29-16  
ACCEPTANCE EXPIRES: 05-29-18  
PROJECT LANE MILES PUBLIC: 2.5  
PROJECT LANE MILES PRIVATE: 0.0  
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
PERMIT REQUIRED! (509) 477-3600  
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION



**UTILITY STATEMENT**  
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.



**COFFMAN ENGINEERS**  
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Spokane, Washington 99201  
Tel 509 328 2994  
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**BELLA TERRA PUD  
PHASE 1**

DRAWING TITLE			
<b>COVER SHEET</b>			
PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO.	
DRAWN BY: TJW	REVIEWED BY: TLA	1	

*Thomas L. Arnold* 2-8-16  
DEVELOPER'S APPROVAL DATE

**GENERAL NOTES**

1. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION ROAD AND SEWER CONSTRUCTION 2008 EDITION OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND 2008 SPOKANE REGIONAL STORM WATER MANUAL.

2. PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 1-800-4-A-SHAW BEFORE YOU DIG.

3. LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES, ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES.

4. THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF THE ACCEPTED ROAD AND DRAINAGE PLANS ON THE JOB SITE. WHENEVER CONSTRUCTION IS IN PROGRESS.

5. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER.

6. THE CONTRACTOR SHOULD TAKE PRECAUTIONS TO PROTECT THE INFILTRATION CAPACITY OF STORM WATER FACILITIES (E.G., LINE THE FACILITY WITH FILTER FABRIC, OVER-EXCAVATE UPON COMPLETION OF THE INFRASTRUCTURE, ETC.)

7. FOR ANY CURB GRADES LESS THAN 0.6% (0.208 FT/FT), A PROFESSIONAL LAND SURVEYOR CURRENTLY LICENSED IN THE STATE OF WASHINGTON SHALL VERIFY THAT THE CURB FORMS ARE AT THE GRADES NOTED ON THE DRAWINGS. THE CONTRACTOR SHALL PLACE TO THE POINT OF PLACEMENT OF CONCRETE. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND COORDINATING WORK WITH THE SURVEYOR.

8. THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL LAND SURVEYOR CURRENTLY LICENSED IN THE STATE OF WASHINGTON TO VERIFY THAT THE CROSS-GUTTER FORMS ARE AT THE CORRECT PLANE GRADE PRIOR TO CONCRETE PLACEMENT. THE CROSS-GUTTERS SHALL BE CONSTRUCTED PRIOR TO PAVING, AND THE PAVEMENT SHALL THEN MATCH THE EDGE OF CONCRETE GUTTER.

9. FOR CONSTRUCTION OF DRYWELLS, INSTALL FILTER FABRIC (AMOCO 4645 OR APPROVED EQUIVALENT) BETWEEN THE WASHED DRAIN ROCK AND THE NATIVE SOILS.

10. BIO-INFILTRATION POND/SWALES SHALL HAVE A MAXIMUM TREATMENT DESIGN DEPTH (FROM POND/SWALE BOTTOM TO ELEVATION OF DRYWELL GRATE OR FIRST OVERFLOW MECHANISM) OF 8 INCHES. EITHER ORGANIC MATTER CONTENT OR CATION EXCHANGE CAPACITY (CEC) TESTING SHALL BE COMPLETED IN ORDER TO SUBSTANTIATE THE TREATMENT SOIL COMPOSITION. THE TESTS SHALL BE PERFORMED ON COMPOSITE SAMPLES TAKEN FROM THE TREATMENT SOIL LAYER FROM THE CONSTRUCTED POND BOTTOM. A COMPOSITE SAMPLE CONSISTS OF WELL-MIXED SOIL OBTAINED FROM AT LEAST FOUR CORES TO A DEPTH OF AT LEAST 8 INCHES, RANDOMLY DISTRIBUTED OVER THE POND BOTTOM TEST AREA. STOCKPILE SAMPLES FROM SUPERFICIAL SOILS CAN BE TESTED FOR INFORMATIONAL PURPOSES TO DETERMINE INITIAL SUITABILITY AND POSSIBLE SOIL AMENDMENTS, BUT WILL NOT BE ACCEPTED IN LIEU OF IN-PLACE TESTING. A MINIMUM OF ONE TEST SHALL BE PERFORMED FOR EACH BICENTRILITATION POND/SWALE 1,500 SQUARE FEET OR LESS, WITH ONE ADDITIONAL TEST FOR EACH ADDITIONAL 2,000 SQUARE FEET OF POND/SWALE BOTTOM, OR FRACTION THEREOF. ONE TEST IS EQUAL TO FOUR CORE SAMPLES TAKEN AND DESCRIBED ABOVE. TESTING RESULTS SHALL BE SUBMITTED AS PART OF THE CONSTRUCTION CERTIFICATION SUBMITTAL REQUIRED FOR RELEASE OF SURVEY POSTED ON PROJECT.

11. CONCRETE APRONS ARE REQUIRED AT THE INLET INTO ANY SWALE OR POND. THE FINISH GRADE OF THE SWALE POND OR APRON, WHERE THE CONCRETE INLET APRON ENDS, SHALL BE A MINIMUM OF 1/4 INCHES BELOW THE FINISHED ELEVATION OF THE CONCRETE CURB APRON EXTENSION. THE INTENTION IS TO ALLOW STORMWATER RUNOFF TO ENTER THE SWALE/POUND UNOBSTRUCTED, WITHOUT BACKING UP INTO THE STREET AND GUTTER DUE TO SOIL-OR GROWTH AT THE INLET.

12. UNLINED POND AND BIOPOLTRATION SWALE BOTTOMS ARE EXPECTED TO INFILTRATE VIA THE POND FLOOR, AND THEREFORE, SHALL NOT BE HEAVILY COMPACTED. EQUIPMENT TRAFFIC SHALL BE LIMITED ON THE POND BOTTOMS. THE FACILITY SUBGRADE SHALL BE A MINIMUM OF 12 INCHES BELOW THE FINISHED GRADE. WITH A MINIMUM THICKNESS OF 48 INCHES AND A MINIMUM INFILTRATION RATE OF 0.15 IN/HR. THE FACILITY SHALL DRAIN WITHIN 72 HOURS OF A STORM EVENT. IF THE FACILITY DOES NOT BEHAVE AS A FACILITY, THE TREATMENT ZONE (2 TO 4 INCHES OF TREATMENT SOIL) SHALL BE A MEDIUM-TO-WELL DRAINING MATERIAL, WITH A MINIMUM INFILTRATION RATE OF .025-.030 IN/HR. SILT TO CLAY OR CLAY SOILS ARE PRESUMED TO HAVE AN INFILTRATION RATE THAT FALLS WITH THIS RANGE. SCARIFY THE FINISH GRADE OF THE POND BOTTOM PRIOR TO HYDROSEEDING/GRASSING. TESTING THAT VERIFIES SUBGRADE MINIMUM INFILTRATION RATES SHALL BE CONDUCTED PRIOR TO CONSTRUCTION. TESTING IS ONLY REQUIRED IF SOILS OTHER THAN SILTY LOAM OR LOAMY SOILS ARE PROPOSED.

13. DURING FINAL INSPECTION, IT IS FOUND THAT THE CONSTRUCTED POND OR SWALE DOES NOT CONFORM TO THE ACCEPTED DESIGN. THE CONTRACTOR SHALL BE RECONSTRUCTED SO THAT IT DOES CONFORM.

14. INFORMATION ON EXISTING CONDITIONS SHOWN ON THESE PLANS WAS OBTAINED FROM A SURVEY PERFORMED BY COFFMAN ENGINEERS. NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY ALL INFORMATION SHOWN ON THESE PLANS AT THE SUBJECT SITE. VERIFY THE LOCATION AND SIZE OF EXISTING UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION ACTIVITIES, INCLUDING UNDERGROUND AND OVERHEAD UTILITIES, UTILITY STRUCTURES, POINTS OF CONNECTION, AND UTILITY CROSSINGS. NOTIFY THE OWNER OF ANY DISCREPANCIES OR EXCEPTIONS ENCOUNTERED PRIOR TO PROCEEDING. ANY COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.

15. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET THE REQUIREMENTS AND STANDARDS OF THE AUTHORITIES HAVING JURISDICTION.

16. THE DRAWINGS INDICATE LOCATIONS, DIMENSIONS, REFERENCES, AND TYPICAL DETAILS OF CONSTRUCTION. THE DRAWINGS DO NOT INDICATE EVERY CONDITION. WORK NOT FULLY DETAILED SHALL BE OF CONSTRUCTION SIMILAR TO PARTS THAT ARE FULLY DETAILED.

17. THE CONTRACTOR SHALL OBTAIN THE APPROPRIATE APPROVALS AND PERMITS FROM THE AUTHORITIES HAVING JURISDICTION PRIOR TO PROCEEDING WITH CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL COORDINATE WITH THE AUTHORITIES HAVING JURISDICTION TO CONFIRM INSPECTION, TESTING, AND CERTIFICATION REQUIREMENTS.

18. CONSTRUCTION SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).

19. EXISTING PROPERTY CORNERS AND SURVEY MONUMENTS SHALL BE PROTECTED DURING CONSTRUCTION. ANY DAMAGED OR OBLITERATED CORNERS OR MONUMENTS SHALL BE RE-ESTABLISHED BY A PROFESSIONAL SURVEYOR AT THE CONTRACTOR'S EXPENSE.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS, COORDINATE REQUIREMENTS WITH THE AUTHORITIES HAVING JURISDICTION.

21. SAFETY STANDARDS AND REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COMPLIED WITH AS SET FORTH BY OSHA.

22. THE CONTRACTOR SHALL HAVE THE APPROPRIATE LICENSES TO PERFORM THE SPECIFIED WORK IN CONFORMANCE WITH THE AUTHORITIES HAVING JURISDICTION.

23. MAINTAIN EXISTING UTILITIES AND PROTECT THEM AGAINST DAMAGE DURING CONSTRUCTION. DO NOT INTERRUPT EXISTING UTILITIES SERVING ADJACENT OCCUPIED OR OPERATING FACILITIES UNLESS AUTHORIZED IN WRITING BY THE OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO OWNER AND AUTHORITIES HAVING JURISDICTION.

24. IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB; IMMEDIATELY NOTIFY THE PROJECT DESIGNER AND OWNER.

25. AREAS DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE CONSTRUCTED OR RESTORED TO ORIGINAL CONDITIONS OR BETTER, TO THE SATISFACTION OF THE OWNER, AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING CONDITIONS PRIOR TO CONSTRUCTION ACTIVITIES AND ANY DAMAGE THAT MAY OCCUR.

26. REMOVE WASTE MATERIALS AND DEBRIS FROM PROJECT SITE AND LEGALLY DISPOSE OF THEM IN AN EPA-APPROVED LANDFILL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

27. RECORD DRAWINGS IDENTIFYING AND ACCURATELY LOCATING SUBSURFACE UTILITIES AND IMPROVEMENTS AND NOTING AS-CONSTRUCTED CONDITIONS SHALL BE PROVIDED BY THE CONTRACTOR AT THE END OF CONSTRUCTION.

28. ALL PRIVATE UTILITIES SHALL BE BURIED ON SITE. CONTRACTOR SHALL COORDINATE WITH THE UTILITY PURVEYOR REGARDING POWER AND NATURAL GAS IMPROVEMENTS, INCLUDING TRENCH EXCAVATION, BEDDING, AND BACKFILLING REQUIREMENTS. INSTALLATION OF THE NATURAL GAS LINE FROM THE POINT OF CONNECTION UP TO AND INCLUDING THE METER SHALL BE BY THE UTILITY PURVEYOR. COORDINATE REQUIREMENTS AND SCHEDULING WITH THE UTILITY PURVEYOR.

29. CONTRACTOR SHALL REFER TO OWNER SPECIAL CONDITIONS FOR CONSTRUCTION STAKE/CONTROL POINTS

PROVIDED BY THE OWNER. ALL OTHER STAKING REQUESTED SHALL BE PROVIDED BY THE CONTRACTOR.

**EARTHWORK & GRADING NOTES**

1. SITE PREPARATION, GRADING, EXCAVATION AND FILL REQUIREMENTS BELOW THE PROPOSED IMPROVEMENTS, EMBANKMENTS, AND UTILITY TRENCHING SHALL BE COMPLETED IN CONFORMANCE WITH WSDOT STANDARD SPECIFICATIONS AND THE GEOTECHNICAL ENGINEERING EVALUATION FOR THE SUBJECT SITE BY ALBEST TESTING AND ENGINEERING FOR BELLA TERRA P L.L.C. PHASE 1 (PROJECT NO. 213-085G).

2. EXAMINE EXPOSED SUBGRADES AND BASE SURFACES FOR COMPLIANCE WITH REQUIREMENTS FOR DIMENSIONAL GRADING, AND ELEVATION TOLERANCES. PREVENT SURFACE WATER AND GROUNDWATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES AND BASE SURFACES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. PROTECT SUBGRADES AND BASE SURFACES FROM SOFTENING, UNDERMINING, WASHOUT, DAMAGE BY RAIN OR WATER ACCUMULATION, AND ADJACENT FREEZING TEMPERATURES AND FROST.

3. REFER TO LANDSCAPE DOCUMENTS FOR ADDITIONAL INFORMATION REGARDING BERM ELEVATIONS, LANDSCAPE GRADING, LANDSCAPE DRAINS, PLACEMENT OF TOPSOIL, AND COORDINATION BETWEEN LANDSCAPING AND STORM WATER MANAGEMENT IMPROVEMENTS.

4. SPOT ELEVATIONS ARE FOR FINISH GRADE UNLESS OTHERWISE NOTED.

5. UNLESS ELEVATIONS AND/OR CONTOURS ARE OTHERWISE SHOWN, NEW FINISH GRADE SURFACES SHALL BE PLACED TO ALLOW FOR POSITIVE DRAINAGE TO RUNOFF COLLECTION DEVICES OR FACILITIES. MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS. IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

6. GROUNDWATER OR UNANTICIPATED SUBSURFACE CONDITIONS SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER FOR ASSESSMENT AND RECOMMENDATIONS. CENTERLINE ROCK PROFILES HAVE BEEN INCLUDED ON THE PLANS FOR THE CONTRACTORS REFERENCE.

7. COMPACTION EFFORTS AND MASS GRADING SHALL BE MONITORED AND TESTED BY AN EXPERIENCED SOILS TECHNICIAN, UNDER THE SUPERVISION OF A LICENSED GEOTECHNICAL ENGINEER REPRESENTING THE OWNER.

**PAVING NOTES**

1. DO NOT APPLY PAVEMENT MATERIALS IF SUBGRADE IS WET OR EXCESSIVELY DAMP, OR IF RAIN IS IMMINENT OR EXPECTED BEFORE TIME REQUIRED FOR ADEQUATE CURE. SURFACE AND AIR TEMPERATURES SHALL CONFORM TO REQUIREMENTS OF WSDOT STANDARD SPECIFICATIONS.

2. COMPLY WITH WSDOT STANDARD SPECIFICATION 5-04 FOR HOT MIX ASPHALT PAVEMENT.

3. WHERE NEW ASPHALT PAVEMENT JOINS EXISTING ASPHALT, THE EXISTING ASPHALT SHALL BE SAWCUT TO A NEAT, VERTICAL EDGE AND TACKED WITH ASPHALT EMULSION IN ACCORDANCE WITH WSDOT SPECIFICATIONS.

4. COMPLY WITH WSDOT STANDARD SPECIFICATION 5-05 AND ACI 301 REQUIREMENTS FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CEMENT CONCRETE PAVEMENT.

5. APPLY PAVEMENT MARKING MATERIALS TO CLEAN, DRY PAVEMENT SURFACES ACCORDING TO WSDOT STANDARD SPECIFICATION 8-22. PAVEMENT MARKINGS SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

6. CONSTRUCTION STAKING FOR CURB AND GUTTER, PAVEMENT GRADES, SIDEWALK GRADES, AND ANY OTHER VERTICAL AND/OR HORIZONTAL ALIGNMENT SHALL BE PROVIDED BY COFFMAN ENGINEERS.

**DRAINAGE NOTES**

1. DRAWING PLANS AND DETAILS INDICATE GENERAL LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITY AND STORM DRAIN PIPING. LOCATION AND ARRANGEMENT OF PIPING LAYOUT TAKE DESIGN CONSIDERATIONS INTO ACCOUNT. INSTALL PIPING AS INDICATED, TO EXTENT PRACTICAL, WHERE SPECIFIC INSTALLATION IS NOT INDICATED, FOLLOW PIPING MANUFACTURER'S WRITTEN INSTRUCTIONS AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

2. FOR EACH TYPE OF PIPE, USE JOINTING MATERIALS RECOMMENDED BY PIPING SYSTEM MANUFACTURER, UNLESS OTHERWISE INDICATED.

3. CONNECT UTILITY PIPING TO EXISTING SYSTEM ACCORDING TO REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION. ARRANGE WITH THE GOVERNING REGULATORY AGENCY OR UTILITY COMPANY FOR TAP OF SIZE AND IN LOCATION INDICATED. COORDINATE REQUIREMENTS AND SCHEDULING WITH AUTHORITIES HAVING JURISDICTION.

4. BURRY PIPING WITH DEPTH OF COVER IN COMPLIANCE WITH REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND MANUFACTURER'S REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH THE AUTHORITIES HAVING JURISDICTION FOR ALL REQUIREMENTS AND TO CONFIRM THAT AN ADEQUATE DEPTH OF COVER IS MAINTAINED OVER THE UTILITIES, INCLUDING CLEARANCES BETWEEN THE VARIOUS UTILITIES.

5. UTILITY PIPE AND CONDUITS SHALL BE INSTALLED WITH CONTINUOUS WARNING TAPE DIRECTLY OVER PIPING AT DEPTHS IN COMPLIANCE WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND AT OUTSIDE EDGE OF UNDERGROUND STRUCTURES. USE DETECTABLE WARNING TAPE OVER NONFERROUS PIPING.



**SURVEY COORDINATES**

1. SURVEY COORDINATE SYSTEM NOT SHOWN SHALL BE A MINIMUM OF 1/4 INCHES BELOW THE FINISHED GRADE.

**TBM INFORMATION**

1. TBM IN THE AREA OF THE SOUTHWEST CORNER OF THE HOME AND MAIN DRIVE.



Know what's below. Call before you dig.

THE DESIGN INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS FOR THE SERVICE AREA OF THE SPOKANE COUNTY ENGINEERS OFFICE. THE DESIGN INFORMATION SHOWN ON THESE PLANS IS FOR THE SERVICE AREA OF THE SPOKANE COUNTY ENGINEERS OFFICE. THE DESIGN INFORMATION SHOWN ON THESE PLANS IS FOR THE SERVICE AREA OF THE SPOKANE COUNTY ENGINEERS OFFICE.

THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

THE DESIGN IMPROVEMENTS SHOWN IN THE SET OF PLANS AND CALCULATIONS CONFORM TO THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY STANDARDS FOR STORM WATER MANAGEMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

**UTILITY STATEMENT**  
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY STANDARDS FOR STORM WATER MANAGEMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.



**BELLA TERRA PUD PHASE 1**

DRAWING TITLE

**GENERAL NOTES**

PROJECT NO: 192401 SCALE: AS NOTED DATE: 2/20/21 REVISION NO: 2  
DESIGNED BY: CEM  
CHECKED BY: CEM  
DRAWN BY: TAA



*Ryan J. Cui* 2-25-16  
DEVELOPER'S APPROVAL DATE

PROPERTY OWNER/PERMIT APPLICANT/CONTACT PERSON  
 ROGER FRUCI  
 BELLA TERRA GARDENS, LLC  
 P. O. BOX 9373  
 SPOKANE, WA 99203  
 PHONE: (509) 879-5340

VICINITY MAP  
 REFER TO SHEET 1

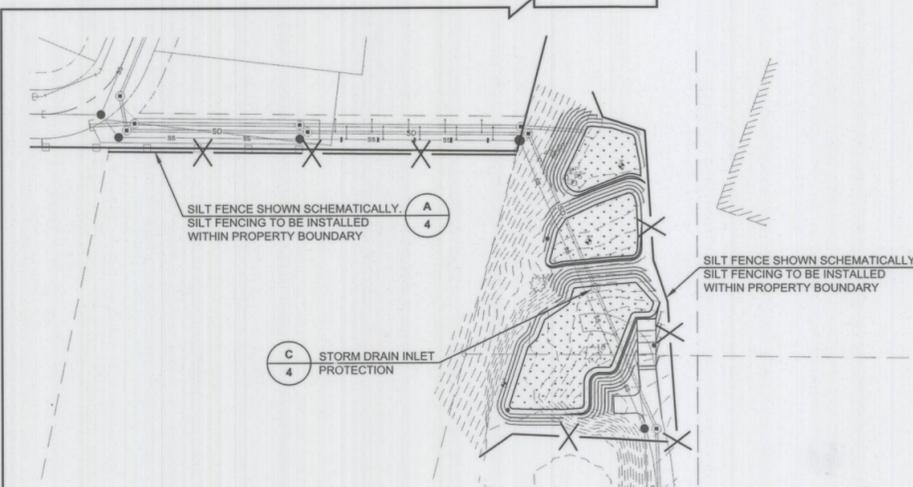
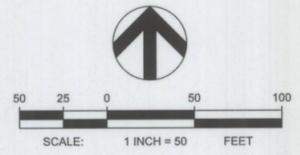
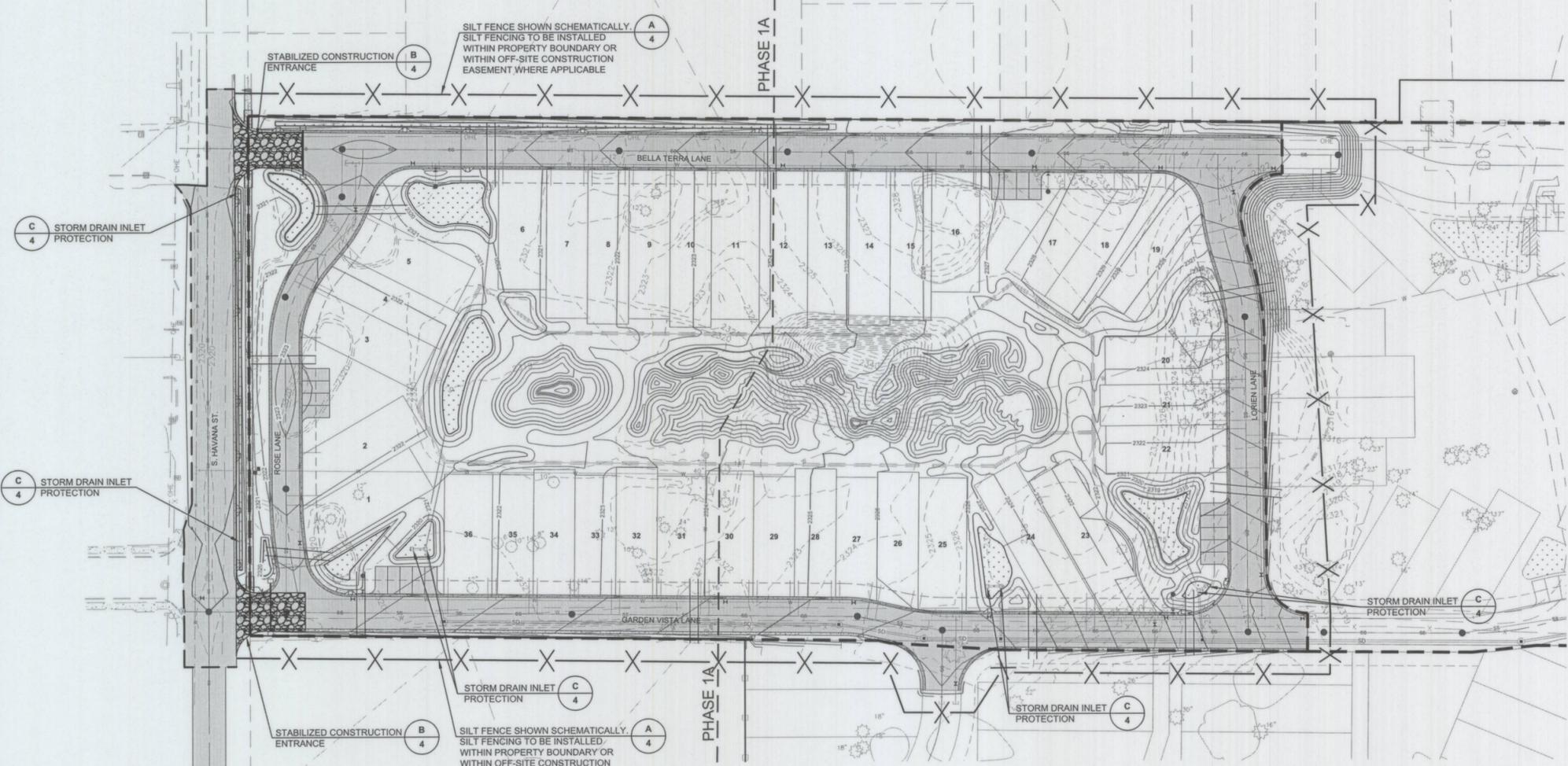
PROPERTY ADDRESS  
 EAST OF HAVANA STREET BETWEEN 23RD AND 24TH  
 AVENUES, SECTION 26, TOWNSHIP 25 NORTH, RANGE 43  
 EAST. PARCEL NO. 35263.9134

DESCRIPTION OF PROJECT  
 RESIDENTIAL PLANNED UNIT DEVELOPMENT (PUD)  
 INCLUDING PRIVATE ROADS, SANITARY SEWER, AND  
 WATER.

ON-SITE/EXISTING VEGETATION AND SOILS  
 CA - CALDWELL SILT LOAM  
 HC - HESSELTINE, VERY ROCKY COMPLEX  
 HB - HESSELTINE, STONEY SILT LOAM  
 THE SITE IS MOSTLY CLEARED WITH SPARSE OR NO  
 VEGETATION AND SCATTERED TREES.

**EROSION & SEDIMENT CONTROL NOTES**

- THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED AS A GUIDELINE IN ORDER TO BEST MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION CONTROL PROBLEMS:
  - CLEAR AND GRUB SUFFICIENTLY FOR INSTALLATION OF TEMPORARY EROSION AND SEDIMENT CONTROL (ESC) BEST MANAGEMENT PRACTICE MEASURES (BMPs);
  - INSTALL TEMPORARY ESC BMPs, CONSTRUCTING SEDIMENT TRAPPING BMPs AS ONE OF THE FIRST STEPS PRIOR TO GRADING;
  - CLEAR, GRUB AND ROUGH GRADE FOR ROADS, TEMPORARY ACCESS POINTS AND UTILITY LOCATIONS;
  - STABILIZE ROADWAY APPROACHES AND TEMPORARY ACCESS POINTS WITH THE APPROPRIATE CONSTRUCTION ENTRY BMP;
  - CLEAR, GRUB AND GRADE SUBJECT SITE;
  - TEMPORARILY STABILIZE, THROUGH RE-VEGETATION OR OTHER APPROPRIATE BMPs, SUBJECT SITE IN SITUATIONS WHERE SUBSTANTIAL CUT OR FILL SLOPES ARE A RESULT OF THE SITE GRADING;
  - CONSTRUCT ROADS, BUILDINGS, PERMANENT STORMWATER FACILITIES (I.E. INLETS, PONDS, UIC FACILITIES, ETC.);
  - PROTECT ALL PERMANENT STORMWATER FACILITIES UTILIZING THE APPROPRIATE BMPs;
  - INSTALL PERMANENT ESC CONTROLS, WHEN APPLICABLE, AND;
  - REMOVE TEMPORARY ESC CONTROLS WHEN:
    - PERMANENT ESC CONTROLS, WHEN APPLICABLE, HAVE BEEN COMPLETELY INSTALLED;
    - ALL LAND-DISTURBING ACTIVITIES THAT HAVE THE POTENTIAL TO CAUSE EROSION OR SEDIMENTATION PROBLEMS HAVE CEASED; AND,
    - VEGETATION HAS BEEN ESTABLISHED IN THE AREAS NOTED AS REQUIRING VEGETATION ON THE ACCEPTED ESC PLAN ON FILE WITH THE LOCAL JURISDICTION.
- INSPECT ALL ROADWAYS, AT THE END OF EACH DAY, ADJACENT TO THE CONSTRUCTION ACCESS ROUTE. IF IT IS EVIDENT THAT SEDIMENT HAS BEEN TRACKED OFF SITE AND/OR BEYOND THE ROADWAY APPROACH, CLEANING IS REQUIRED.
- IF SEDIMENT REMOVAL IS NECESSARY PRIOR TO STREET WASHING, IT SHALL BE REMOVED BY SHOVELING OR PICKUP SWEEPING AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- IF STREET WASHING IS REQUIRED TO CLEAN SEDIMENT TRACKED OFF SITE, ONCE SEDIMENT HAS BEEN REMOVED, STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON-SITE OR OTHERWISE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.
- RESTORE CONSTRUCTION ACCESS ROUTE EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITION.
- RETAIN THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICAL.
- INSPECT SEDIMENT CONTROL BMPs WEEKLY AT A MINIMUM, DAILY DURING A STORM EVENT, AND AFTER ANY DISCHARGE FROM THE SITE (STORMWATER OR NON-STORMWATER). THE INSPECTION FREQUENCY MAY BE REDUCED TO ONCE A MONTH IF THE SITE IS STABILIZED AND INACTIVE.
- CONTROL FUGITIVE DUST FROM CONSTRUCTION ACTIVITY IN ACCORDANCE WITH THE STATE AND/OR LOCAL AIR QUALITY CONTROL AUTHORITIES WITH JURISDICTION OVER THE PROJECT AREA. DO NOT USE WATER WHEN IT MAY DAMAGE ADJACENT CONSTRUCTION OR CREATE HAZARDOUS OR OBJECTABLE CONDITIONS, SUCH AS ICE, FLOODING, AND POLLUTION.
- STABILIZE EXPOSED UNWORKED SOILS (INCLUDING STOCKPILES) AND WITHIN 5 DAYS DURING THE REGIONAL WET SEASON (OCTOBER 1 THROUGH JUNE 30), SOILS MUST BE STABILIZED AT THE END OF A SHIFT BEFORE A HOLIDAY WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. THIS TIME LIMIT MAY ONLY BE ADJUSTED BY A LOCAL JURISDICTION WITH A "QUALIFIED LOCAL PROGRAM" IF IT CAN BE DEMONSTRATED THAT THE RECENT PRECIPITATION JUSTIFIES A DIFFERENT STANDARD AND MEETS THE REQUIREMENTS SET FORTH IN THE CONSTRUCTION STORMWATER GENERAL PERMIT.
- PROTECT INLETS, DRYWELLS, CATCH BASINS AND OTHER STORMWATER MANAGEMENT FACILITIES FROM SEDIMENT, WHETHER OR NOT FACILITIES ARE OPERABLE.
- KEEP ROADS ADJACENT TO INLETS CLEAN.
- INSPECT INLETS WEEKLY AT A MINIMUM AND DAILY DURING STORM EVENTS.
- CONSTRUCT STORMWATER CONTROL FACILITIES (DETENTION/RETENTION STORAGE POND OR SWALES) BEFORE GRADING BEGINS. THESE FACILITIES SHALL BE OPERATIONAL BEFORE THE CONSTRUCTION OF IMPERVIOUS SITE IMPROVEMENTS.
- STOCKPILE MATERIALS (SUCH AS TOPSOIL) ON SITE, KEEPING OFF OF ROADWAY AND SIDEWALKS.
- COVER, CONTAIN AND PROTECT ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCT, AND NONMETAL WASTES PRESENT ON SITE FROM VANDALISM (SEE CHAPTER 17.3.04 WAC FOR THE DEFINITION OF INERT WASTE), USE SECONDARY CONTAINMENT FOR ON-SITE FUELING TANKS.
- CONDUCT MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM REPAIRS, SOLVENT AND DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES THAT MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CLEAN ALL CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. IF RAINING OVER EQUIPMENT OR VEHICLE, PERFORM EMERGENCY REPAIRS ON SITE USING TEMPORARY PLASTIC BENEATH THE VEHICLE.
- CONDUCT APPLICATION OF AGRICULTURAL CHEMICALS, INCLUDING FERTILIZERS AND PESTICIDES, IN SUCH A MANNER, AND AT APPLICATION RATES, THAT INHIBITS THE LOSS OF CHEMICALS INTO STORMWATER RUNOFF FACILITIES. AMEND MANUFACTURERS RECOMMENDED APPLICATION RATES AND PROCEDURES TO MEET THIS REQUIREMENT, IF NECESSARY.
- INSPECT ON A REGULAR BASIS (AT A MINIMUM WEEKLY, AND DAILY DURING/AFTER A RUNOFF PRODUCING STORM EVENT) AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPs TO ENSURE SUCCESSFUL PERFORMANCE OF THE BMPs. NOTE THAT INLET PROTECTION DEVICES SHALL BE CLEANED OR REMOVED AND REPLACED BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE.
- REMOVE TEMPORARY ESC BMPs WITHIN 30 DAYS AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. PERMANENTLY STABILIZE AREAS THAT ARE DISTURBED DURING THE REMOVAL PROCESS.
- PROVIDE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES, ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY, INCLUDING OBTAINING THE APPROPRIATE PERMITS AND APPROVALS.
- EROSION CONTROL MEASURES IN ADDITION TO THOSE INDICATED AS PART OF THIS PLAN MAY BE REQUIRED DUE TO UNFORESEEN CONDITIONS, IF THE MEASURES DO NOT FUNCTION AS INTENDED, OR IF THE AUTHORITIES HAVING JURISDICTION DETERMINE INDICATED MEASURES ARE INADEQUATE.
- FILTER FENCE SHALL BE USED TO AID IN CONTAINING ANY SEDIMENT ON THE SITE DURING CONSTRUCTION. STABILIZED CONSTRUCTION ENTRANCES SHALL BE USED AT POINTS OF INGRESS AND EGRESS FOR CONSTRUCTION VEHICLES. STORM DRAIN INLET PROTECTION SHALL BE USED ON ALL STORM DRAIN STRUCTURES, INCLUDING CATCH BASINS AND DRYWELLS. THE CONTRACTOR SHALL KEEP THE AREAS ADJACENT TO THE SITE INCLUDING ROADWAYS AND PARKING LOTS FREE FROM DEBRIS. REFER TO THE EROSION AND SEDIMENT CONTROL MEASURE DETAILS FOR ADDITIONAL INFORMATION.
- PROVIDE A DESIGNATED, POSTED CONCRETE WASHOUT AREA. THE CONCRETE WASHOUT SHALL NOT BE ALLOWED TO DRAIN OFF THE SITE OR INTO ANY EXISTING OR FUTURE STORM DRAINAGE FACILITIES. HARDENED CONCRETE WASHOUT SHALL BE BROKEN UP AND REMOVED FROM THE SITE.
- LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- OUTSIDE OF PHASE 1 ONLY, I.E. EAST OF LOREN LANE, APPLY AN ANNUAL RYE SEED MIX TO ALL SOILS EXPOSED OR DISTURBED BY CONSTRUCTION ACTIVITIES UNLESS OTHERWISE SPECIFIED ON THE LANDSCAPE PLAN. THE DISTURBED AREAS SHALL BE HYDROSEEDING USING A STANDARD HYDROSEED APPLICATION PER WSDOT STANDARD SPECIFICATIONS, INCLUDING WOOD FIBER MULCH, GUAR GUM TACKIFIER, AND SLOW RELEASE FERTILIZER. PRIOR TO APPLYING THE HYDROSEED, THE CONTRACTOR SHALL VERTICALLY (WITH A CATERPILLAR OR SIMILAR) PERPENDICULAR TO THE CONTOURS TO SCARRIFY THE SOIL ENOUGH TO PROVIDE PLACES FOR THE SEED TO STICK/ESTABLISH TO ALLOW FOR BETTER GERMINATION. APPLY SEEDING WITHIN FIVE (5) DAYS AFTER FINISHED GRADING IS COMPLETE. EROSION CONTROL BLANKETS MAY BE USED WHERE SEEDING IS NOT FEASIBLE.



THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.

THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

**UTILITY STATEMENT**  
 LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

**SPOKANE COUNTY ENGINEERS OFFICE**  
**OFFICIAL PUBLIC DOCUMENT ORIGINAL**  
**CONSTRUCTION PLANS**  
 PROJECT #: 15-0401  
 DATE ACCEPTED: 03-23-16  
 ACCEPTANCE EXPIRES: 03-23-18  
 PROJECT LANE MILES PUBLIC: 4.0  
 PROJECT LANE MILES PRIVATE: 0.0  
 CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
 PERMIT REQUIRED! (509) 477-3600  
 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION.

**TBM INFORMATION**  
 1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL+2319.63

**SURVEY COORDINATES**  
 1. SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.

**COFFMAN ENGINEERS**  
 10 N. Post Street Suite 500  
 Spokane, Washington 99201  
 Tel 509 328 2994  
 Fax 509 328 2999

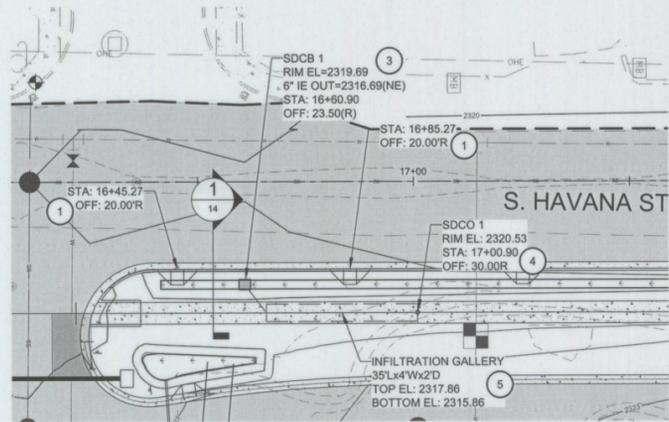
**BELLA TERRA PUD**  
**PHASE 1**

DRAWING TITLE  
**EROSION & SEDIMENT CONTROL PLAN**

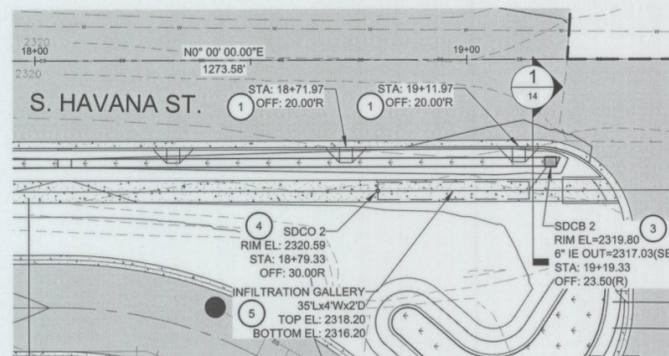
PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO.	3
DRAWN BY: TJW	REVIEWED BY: TLA		

*Roger Fruci*  
 DEVELOPER'S APPROVAL  
 DATE: 2-28-16

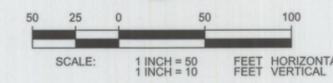
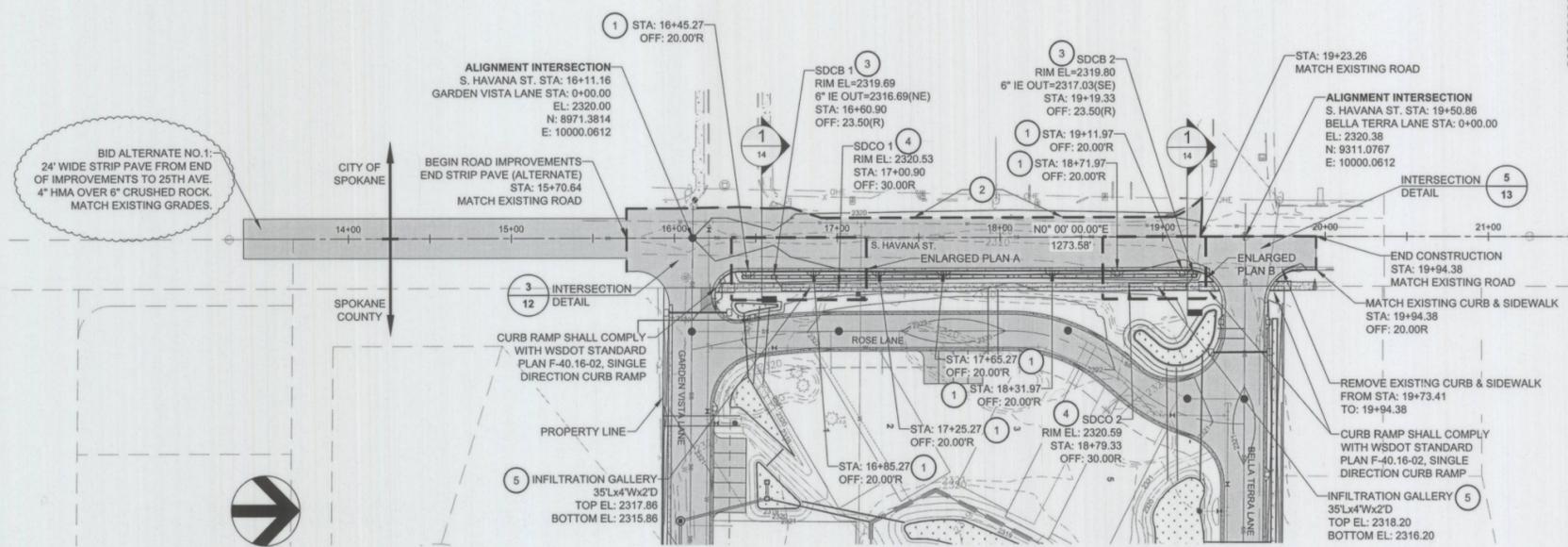
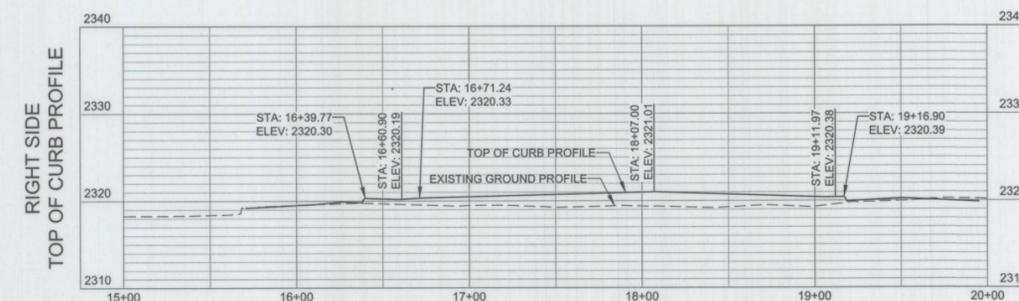
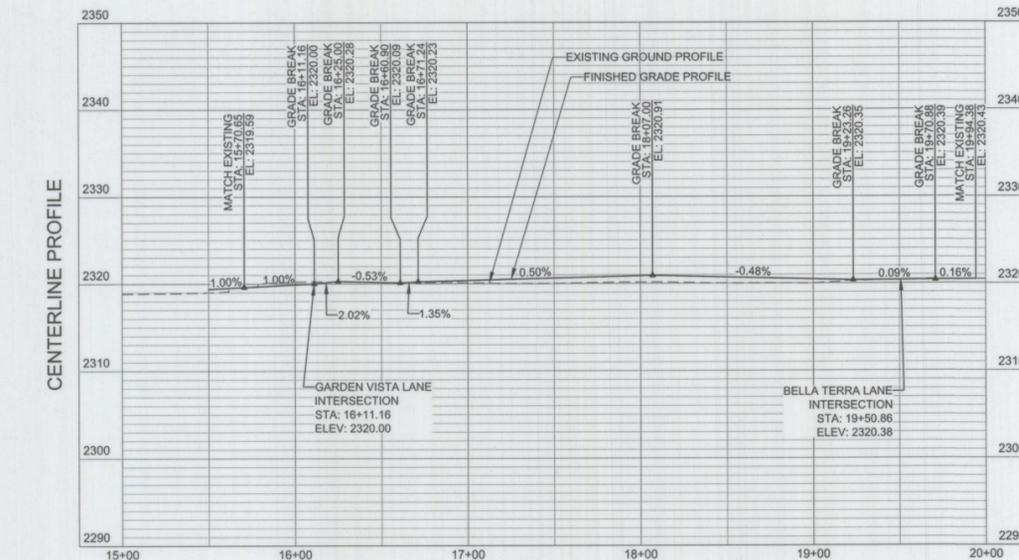
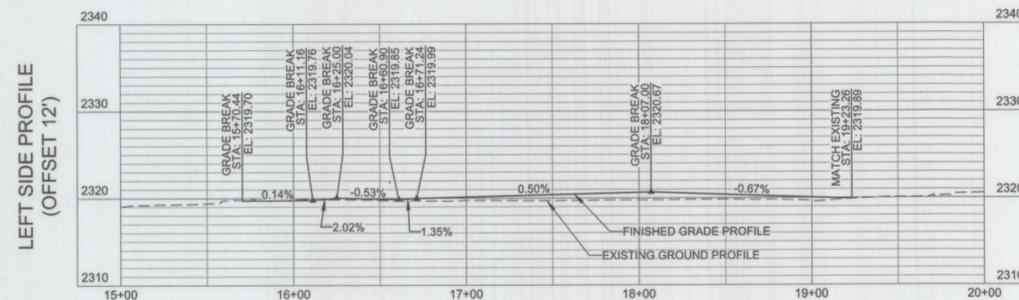




**ENLARGED PLAN A**  
SCALE: 1 INCH = 20



**ENLARGED PLAN B**  
SCALE: 1 INCH = 20



*[Signature]*  
DEVELOPER'S APPROVAL  
DATE: 2-28-16

**ABBREVIATIONS**

ACT	ACTUAL
EL	ELEVATION
BVCE	BEGINNING VERTICAL CURVATURE ELEVATION
BVCS	BEGINNING VERTICAL CURVATURE STATION
EVCE	ENDING VERTICAL CURVATURE ELEVATION
EVCS	ENDING VERTICAL CURVATURE STATION
HPT	HIGH POINT
IE	INVERT ELEVATION
L	LENGTH
LPT	LOW POINT
LVC	LENGTH OF VERTICAL CURVE
SD	STORM DRAIN
SS	SANITARY SEWER
STA	STATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL-CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
SDDW	STORM DRAIN DRYWELL
SODM	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
WAWA	WATER
TD	TRENCH DRAIN
DI	DUCTILE PIPE
BT	BELLA TERRA
PH2	PHASE 2
ST	STREET
AVE	AVENUE
TYP	TYPICAL
GRADE	GRADE
OFF	OFFSET
N	NORTH
S	SOUTH
E	EAST
W	WEST
SDCO	STORM DRAIN CLEANOUT
R	RADIUS

**NOTES**

- REFER TO SHEET 2 FOR GENERAL NOTES.
- STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), WATER TIGHT, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M252 FOR PIPES WITH DIAMETERS OF 10 INCHES AND SMALLER AND AASHTO M294 FOR PIPES WITH DIAMETERS BETWEEN 12 INCHES TO 60 INCHES.
- CATCH BASINS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-4 WITH BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-01.
- CLEANOUTS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-13.
- CURB INLET SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-8.
- CONTRACTOR TO MEET WITH OWNER ON SITE TO GET AUTHORIZATION PRIOR TO REMOVING OR POTENTIALLY DAMAGING ANY AND ALL EXISTING TREES.
- CONTRACTOR TO COORDINATE WITH OWNER FOR SCOPE OF WORK AND SCHEDULE OF FINE GRADING WITHIN THE GARDEN LIMITS.

**KEY NOTES**

- INSTALL CURB INLET.
- CONTRACTOR TO INSTALL CRUSHED SURFACING ROCK BETWEEN THE ASPHALT CURB (BEHIND) AND EXISTING GROUND. GRADE TO DRAIN. THE FLOW LINE INTO EXISTING INTERSECTION RADIUS FLOW LINE.
- INSTALL CATCH BASIN.
- INSTALL CLEANOUT.
- INSTALL INFILTRATION GALLERY. SEE DETAIL 10, SHEET 15

**SPOKANE COUNTY ENGINEERS OFFICE**  
OFFICIAL PUBLIC DOCUMENT ORIGINAL  
**CONSTRUCTION PLANS**  
PROJECT #: P-2625  
DATE ACCEPTED: 03-23-16  
ACCEPTANCE EXPIRES: 03-23-18  
PROJECT LANE MILES PUBLIC: 02.15  
PROJECT LANE MILES PRIVATE: 0.00  
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
PERMIT REQUIRED! (509) 477-3000  
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

*\* West half of street subject to City of Spokane permit process.*

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.

THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

**UTILITY STATEMENT**  
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.



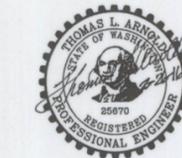
Know what's below.  
Call before you dig.

**TBM INFORMATION**

- SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-2319.83

**SURVEY COORDINATES**

- SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.



**COFFMAN ENGINEERS**  
10 N. Post Street Suite 500  
Spokane, Washington 99201  
Tel 509 328 2994  
Fax 509 328 2999

**BELLA TERRA PUD PHASE 1**

DRAWING TITLE: **S. HAVANA ST. IMPROVEMENT**

PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO. 5	
DRAWN BY: TJW	REVIEWED BY: TLA		

**ABBREVIATIONS**

ACT	ACTUAL
EL	ELEVATION
BVCS	BEGINNING VERTICAL CURVATURE ELEVATION
BVCS	BEGINNING VERTICAL CURVATURE STATION
EVCS	ENDING VERTICAL CURVATURE ELEVATION
EVCS	ENDING VERTICAL CURVATURE STATION
HPT	HIGH POINT
IE	INVERT ELEVATION
L	LENGTH
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SD	STORM DRAIN
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WWA	WATER
TD	TRENCH DRAIN
DI	DUCTILE PIPE
BT	BELLA TERRA
PH2	PHASE 2
ST	STREET
AVE	AVENUE
TYP	TYPICAL
G	GRADE
OFF	OFFSET
N	NORTH
S	SOUTH
E	EAST
W	WEST
SDCO	STORMDRAIN CLEANOUT
R	RADIUS

**SPOKANE COUNTY ENGINEERS OFFICE**  
**OFFICIAL PUBLIC DOCUMENT ORIGINAL**  
**CONSTRUCTION PLANS**  
 PROJECT # 2-2235  
 DATE ACCEPTED: 03-23-16  
 ACCEPTANCE EXPIRES: 03-23-18  
 PROJECT LANE MILES PUBLIC: 0.29  
 PROJECT LANE MILES PRIVATE: 0.29  
 CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS - REVISIONS ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
 PERMIT REQUIRED! (509) 477-3000  
 NOTIFY PERMIT ENGINEER 3 BUSINESS DAYS PRIOR TO CONSTRUCTION

*\* Grading/Wall on south plot boundary subject to temporary construction easement.*

**NOTES**

- REFER TO SHEET 2 FOR GENERAL NOTES.
- STORM MANHOLES SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-2, MANHOLE I-48. MANHOLES WITH DEPTHS BETWEEN 4' & 6' SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-5, MANHOLE TYPE III-48.
- STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), WATERTIGHT, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M252 FOR PIPES WITH DIAMETERS OF 10 INCHES AND SMALLER AND AASHTO M294 FOR PIPES WITH DIAMETERS BETWEEN 12 INCHES TO 60 INCHES.
- CATCH BASINS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-4 WITH BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30-40-01.
- CLEANOUTS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-13.
- CURB INLET SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-8.
- DUCTILE IRON PIPE SHALL BE THICKNESS CLASS 52 MEETING THE REQUIREMENTS OF ASTM A716.
- CONTRACTOR TO MEET WITH OWNER ON SITE TO GET AUTHORIZATION PRIOR TO REMOVING OR POTENTIALLY DAMAGING ANY AND ALL EXISTING TREES.
- CONTRACTOR TO COORDINATE WITH OWNER FOR SCOPE OF WORK AND SCHEDULE OF FINE GRADING WITHIN THE GARDEN LIMITS.
- FIRE LANE - PARKING SIGNS ARE REQUIRED. THE EXACT LOCATION IS TO BE DETERMINED BY FIRE DISTRICT #8 DURING CONSTRUCTION.

**KEY NOTES**

- INSTALL STORM DRAIN MANHOLE (SEE INVERT ELEVATIONS ON PROFILE)
- INSTALL CURB INLET
- DRAINAGE SWALE, SEE DETAIL 11, SHEET 15
- PARKING STALLS (9'x20' EA.). PAVEMENT SECTION SHALL MATCH ADJACENT STREET, SLOPE (2%) BACK TOWARDS ROAD GUTTER.
- STOP & STREET SIGN(S)
- INSTALL CATCH BASIN
- INSTALL 2'x2' INFILTRATION GALLERY CONNECT TO ROOF DOWNSPOUT. SEE DETAIL 9, SHEET 15.
- ACCESS GATE BY OWNER. COORDINATE WITH OWNER FOR EXACT REQUIREMENTS. VEHICLE DETECTION SENSORS BY OWNER SHALL BE INSTALLED WITHIN THE ROAD BEFORE ASPHALT PAVING.
- UNDERDRAINED DRAINAGE SWALE, SEE DETAIL 12, SHEET 15.
- EXCAVATE LOOSE FILL MATERIAL IN GEOTECHNICAL TEST PIT LOCATIONS AND GRADE WITH COMPACTED FILL MATERIAL.
- STREET IMPROVEMENTS FOR THE PHASE 1A TIME SCHEDULE SHALL EXTEND 10' EAST OF LOT 31. THE STORM DRAINAGE PIPING IMPROVEMENTS FOR THE PHASE 1A TIME SCHEDULE SHALL BEGIN AT SDMH 3. SEE OWNER'S SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- INSTALL 4'x4' RIP RAP PAD AT THE END OF THE GUTTER. RIP RAP SHALL BE 1.5" DIAMETER MINIMUM, 6" DIAMETER AVERAGE, AND 8.3" DIAMETER MAXIMUM INSTALLED 1.0' DEEP.
- IRRIGATION/ELECTRICAL SLEEVES (TYPICAL) SEE WATER PLANS FOR REQUIREMENTS.

**CURVE TABLE**

CURVE #	RADIUS	LENGTH	CHORD BEARING	CHORD L	DELTA	TAN
C1	100.00	20.70	S83°25'23"E	20.66	11°51'35"	10.39
C2	150.00	31.34	S83°28'41"E	31.28	11°58'10"	15.73
C3	200.00	61.34	N9°07'58"W	61.10	17°34'19"	30.91
C4	360.31	71.45	N5°40'51"W	71.33	11°21'43"	35.84
C5	100.00	69.50	N19°54'35"E	68.11	39°49'10"	36.22
C6	100.00	68.54	N20°11'04"E	67.21	39°16'11"	35.68
C7	200.00	64.47	N8°41'04"W	64.19	18°28'06"	32.52

**TBM INFORMATION**

- SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-2319.63

**SURVEY COORDINATES**

- SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.



**BELLA TERRA PUD**  
**PHASE 1**  
**GARDEN VISTA LANE**

DRAWING TITLE

PROJECT NO. 150401 SCALE: AS NOTED DATE: 2/8/2016 REVISION NO.

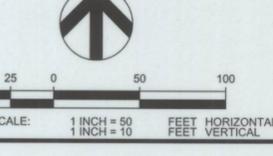
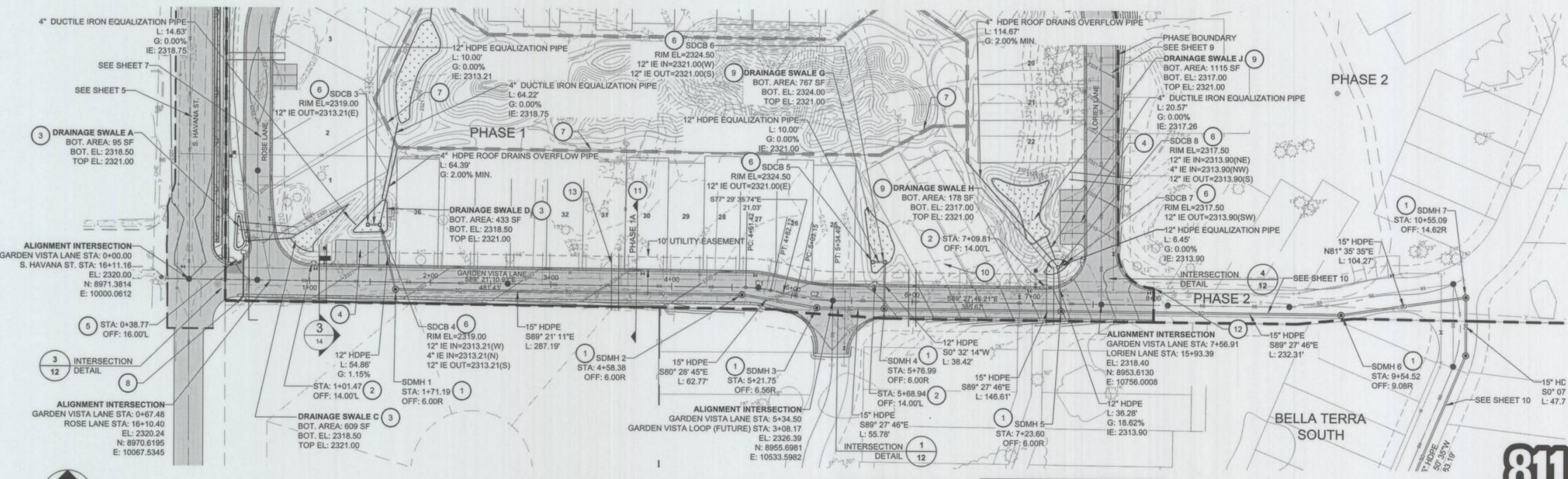
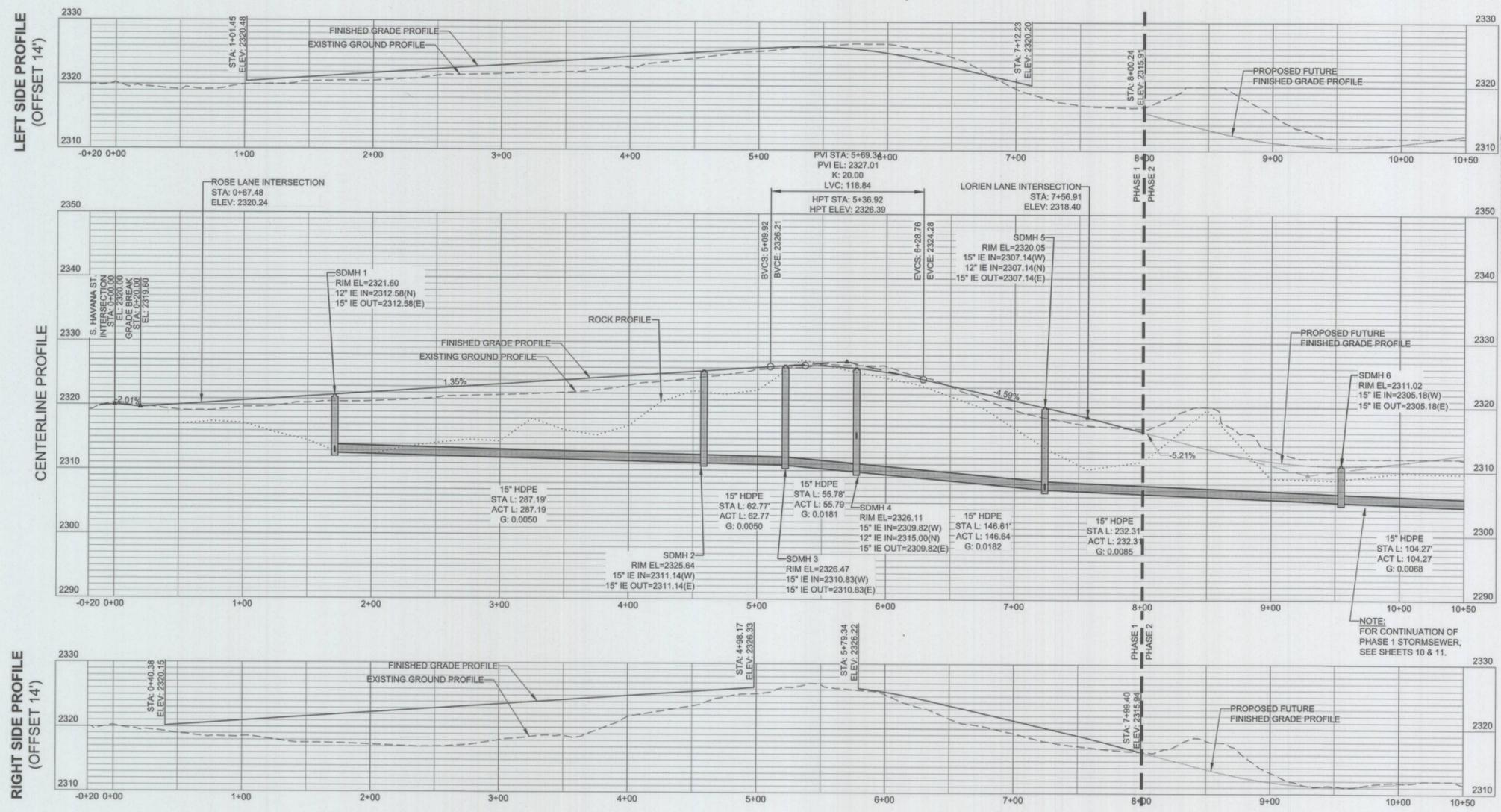
DESIGNED BY: CBM CHECKED BY: CBM DRAWING NO.

DRAWN BY: TJW REVIEWED BY: TLA

6



Know what's below.  
 Call before you dig.



THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.

THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

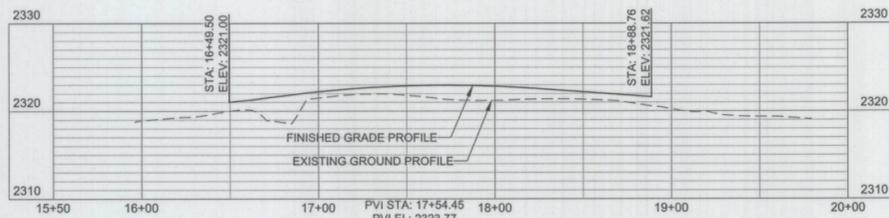
**UTILITY STATEMENT**  
 LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

DEVELOPER'S APPROVAL: *R. P. Luis* DATE: 2-28-16

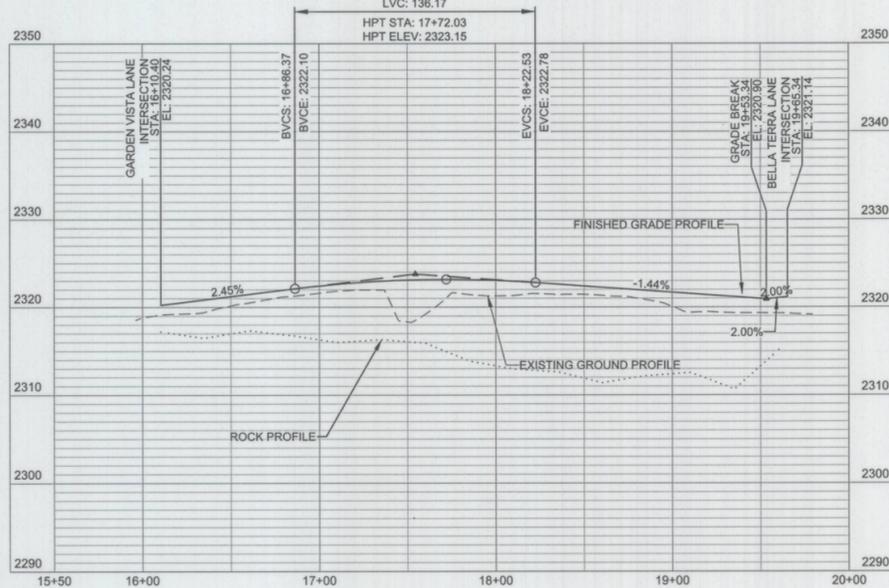
**ABBREVIATIONS**

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EL	ELEVATION
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BVCS	BEGINNING VERTICAL CURVATURE STATION
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SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
WWA	WATER
TD	TRENCH DRAIN
DI	DUCTILE PIPE
BT	BELLA TERRA
PH2	PHASE 2
ST	STREET
AVE	AVENUE
TYP	TYPICAL
G	GRADE
OFF	OFFSET
N	NORTH
S	SOUTH
E	EAST
W	WEST
SDCO	STORMDRAIN CLEANOUT
R	RADIUS

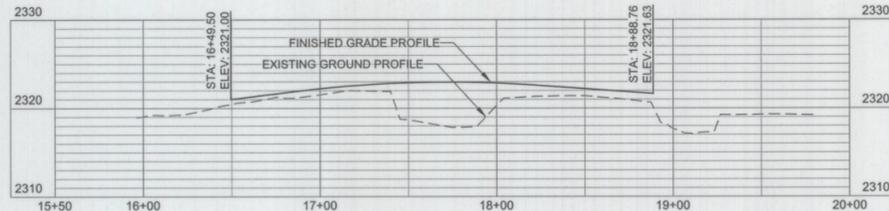
**LEFT SIDE PROFILE (OFFSET 14')**



**CENTERLINE PROFILE**



**RIGHT SIDE PROFILE (OFFSET 14')**



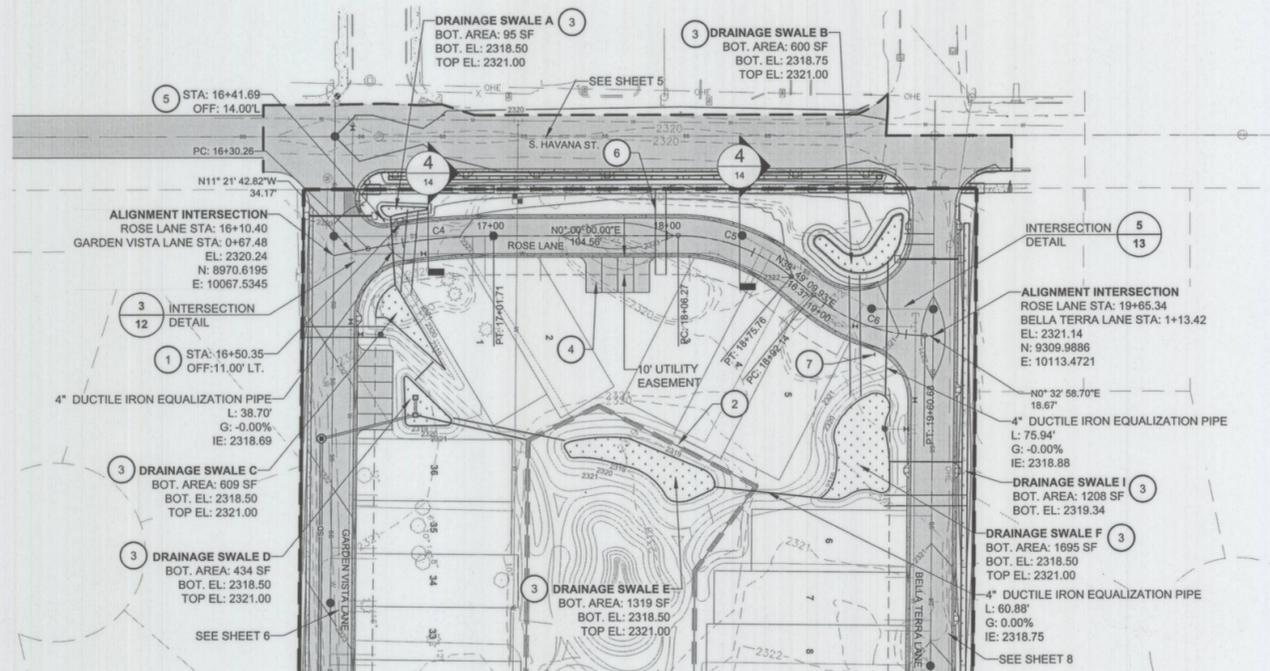
**NOTES**

- REFER TO SHEET 2 FOR GENERAL NOTES.
- STORM MANHOLES SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-2, MANHOLE I-48. MANHOLES WITH DEPTHS BETWEEN 4' & 6' SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-5, MANHOLE TYPE III-48.
- STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), WATERTIGHT, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M252 FOR PIPES WITH DIAMETERS OF 10 INCHES AND SMALLER AND AASHTO M294 FOR PIPES WITH DIAMETERS BETWEEN 12 INCHES TO 60 INCHES.
- CATCH BASINS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-4 WITH BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-01.
- CURB INLETS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-8, CURB INLET TYPE 1.
- DUCTILE IRON PIPE SHALL BE THICKNESS CLASS 52 MEETING THE REQUIREMENTS OF ASTM A716.
- CONTRACTOR TO MEET WITH OWNER ON SITE TO GET AUTHORIZATION PRIOR TO REMOVING OR POTENTIALLY DAMAGING ANY AND ALL EXISTING TREES.
- CONTRACTOR TO COORDINATE WITH OWNER FOR SCOPE OF WORK AND SCHEDULE OF FINE GRADING WITHIN THE GARDEN LIMITS.
- FIRE LANE - PARKING SIGNS ARE REQUIRED. THE EXACT LOCATION IS TO BE DETERMINED BY FIRE DISTRICT #8 DURING CONSTRUCTION.

**KEY NOTES**

- INSTALL CURB INLET
- INSTALL 2'x2' INFILTRATION GALLERY. CONNECT TO ROOF DOWNSPOUTS. SEE DETAIL 9, SHEET 15
- DRAINAGE SWALE, SEE DETAIL 11, SHEET 15
- PARKING STALLS (9'x20' EA.). PAVEMENT SECTION SHALL MATCH ADJACENT STREET. SLOPE (2%) BACK TOWARDS ROAD GUTTER.
- STOP AND STREET SIGN(S)
- IRRIGATION/ELECTRICALS SLEEVES (TYPICAL). SEE WATER PLANS FOR REQUIREMENTS.
- STREET SIGN(S)

CURVE TABLE						
CURVE #	RADIUS	LENGTH	CHORD BEARING	CHORD L	DELTA	TAN
C1	100.00	20.70	S83°25'23"E	20.66	11°51'35"	10.39
C2	150.00	31.34	S83°28'41"E	31.28	11°58'10"	15.73
C3	200.00	61.34	N9°07'58"W	61.10	17°34'19"	30.91
C4	360.31	71.45	N5°40'51"W	71.33	11°21'43"	35.84
C5	100.00	69.50	N19°54'35"E	68.11	39°49'10"	36.22
C6	100.00	68.54	N20°11'04"E	67.21	39°16'11"	35.68
C7	200.00	64.47	N8°41'04"W	64.19	18°28'06"	32.52



**SPOKANE COUNTY ENGINEERS OFFICE**  
**OFFICIAL PUBLIC DOCUMENT ORIGINAL**  
**CONSTRUCTION PLANS**  
 PROJECT #: P-2225  
 DATE ACCEPTED: 03-23-16  
 ACCEPTANCE EXPIRES: 03-23-18  
 PROJECT LANE MILES PUBLIC: 0.2314  
 PROJECT LANE MILES PRIVATE: 0.0000  
 RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROAD AND DRAINAGE FACILITIES FOR MAINTENANCE.  
 PERMIT REQUIRED! (509) 477-3600  
 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.

THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

**UTILITY STATEMENT**  
 LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.



Know what's below.  
 Call before you dig.

**TBM INFORMATION**  
 1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-219.63

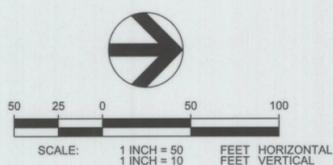
**SURVEY COORDINATES**  
 1. SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.

**COFFMAN ENGINEERS**  
 10 N. Post Street Suite 500  
 Spokane, Washington 99201  
 Tel 509 328 2994  
 Fax 509 328 2999

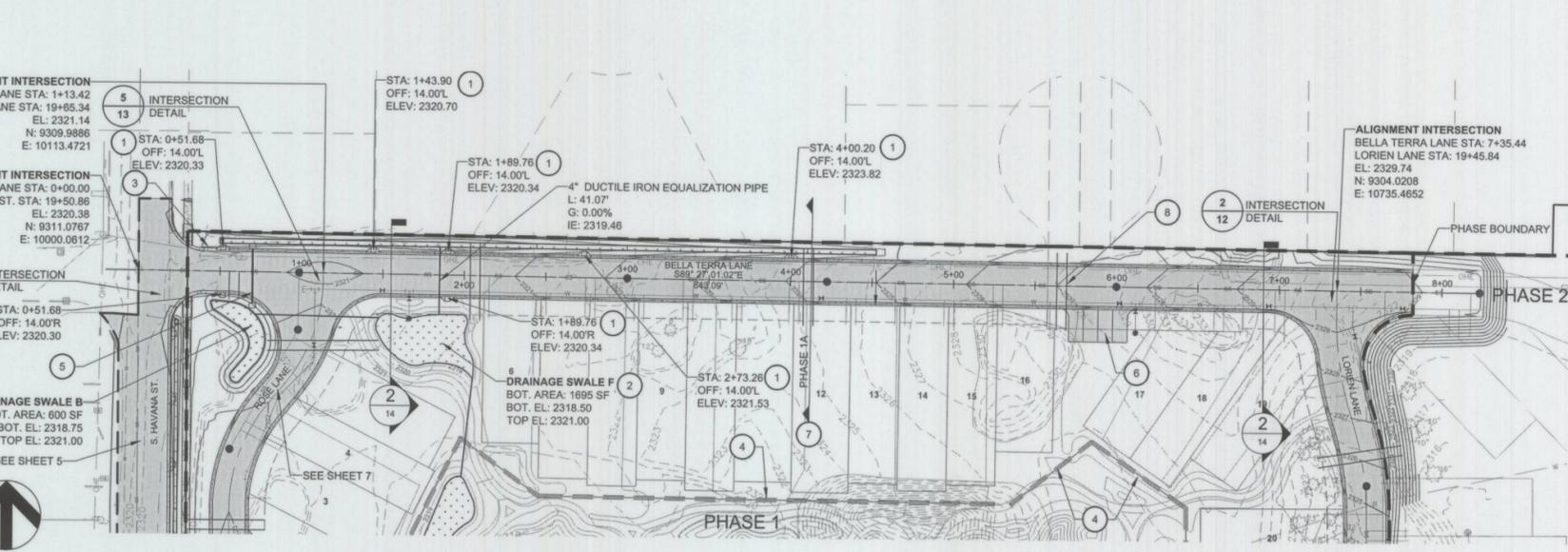
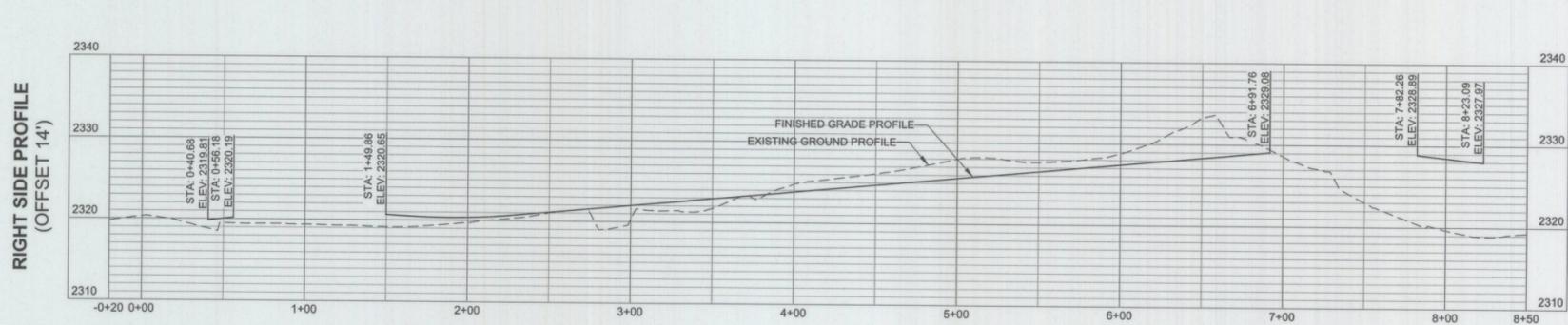
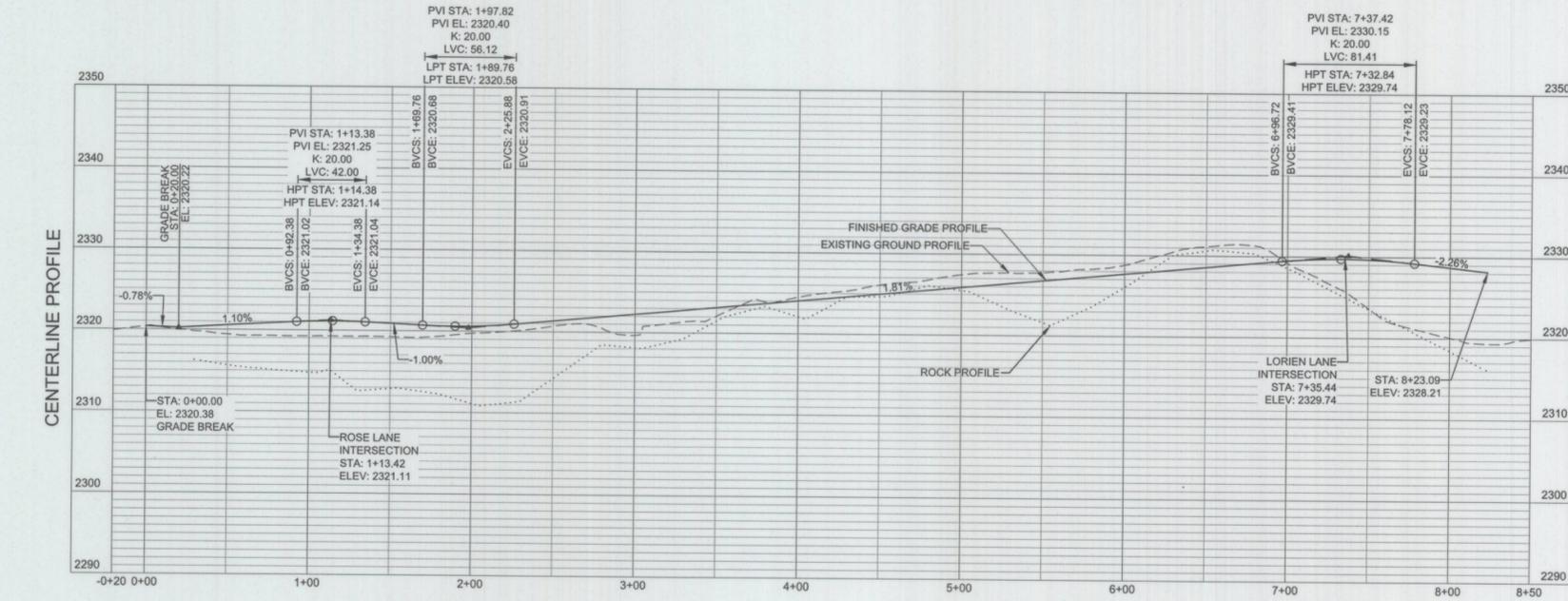
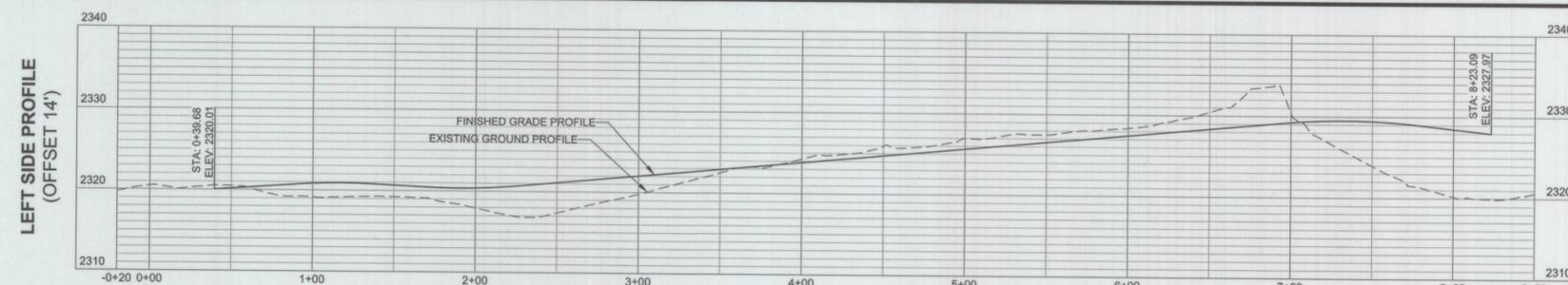
**BELLA TERRA PUD PHASE 1**  
**ROSE LANE**

DRAWING TITLE

PROJECT NO. 150401	SCALE AS NOTED	DATE 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO. 7	
DRAWN BY: TJW	REVIEWED BY: TLA		



*Ron P. Cui*  
 DEVELOPER'S APPROVAL DATE 2-28-16



**ABBREVIATIONS**

ACT	ACTUAL
EL	ELEVATION
BVCE	BEGINNING VERTICAL CURVATURE ELEVATION
BVCS	BEGINNING VERTICAL CURVATURE STATION
EVCE	ENDING VERTICAL CURVATURE ELEVATION
EVCS	ENDING VERTICAL CURVATURE STATION
HPT	HIGH POINT
IE	INVERT ELEVATION
L	LENGTH
LPT	LOW POINT
LVC	LENGTH OF VERTICAL CURVE
SD	STORM DRAIN
SS	SANITARY SEWER
STA	STATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL-CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
SDDW	STORM DRAIN DRYWELL
SOMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
WVA	WATER
TD	TRENCH DRAIN
DI	DUCTILE PIPE
BT	BELLA TERRA
PH2	PHASE 2
ST	STREET
AVE	AVENUE
TYP	TYPICAL
G	GRADE
OFF	OFFSET
N	NORTH
S	SOUTH
E	EAST
W	WEST
SDCO	STORMDRAIN CLEANOUT
R	RADIUS

**NOTES**

- REFER TO SHEET 2 FOR GENERAL NOTES.
- STORM MANHOLES SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-2, MANHOLE I-48. MANHOLES WITH DEPTHS BETWEEN 4' & 6' SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-5, MANHOLE TYPE III-48.
- STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), WATERTIGHT, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M252 FOR PIPES WITH DIAMETERS OF 10 INCHES AND SMALLER AND AASHTO M294 FOR PIPES WITH DIAMETERS BETWEEN 12 INCHES TO 60 INCHES.
- CATCH BASINS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-4 WITH BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30-40-01.
- CURB INLETS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-8, CURB INLET TYPE 1.
- DUCTILE IRON PIPE SHALL BE THICKNESS 52 MEETING THE REQUIREMENTS OF ASTM A716.
- CONTRACTOR TO MEET WITH OWNER ON SITE TO GET AUTHORIZATION PRIOR TO REMOVING OR POTENTIALLY DAMAGING ANY AND ALL EXISTING TREES.
- CONTRACTOR TO COORDINATE WITH OWNER FOR SCOPE OF WORK AND SCHEDULE OF FINE GRADING WITHIN THE GARDEN LIMITS.
- FIRE LANE - PARKING SIGNS ARE REQUIRED. THE EXACT LOCATION IS TO BE DETERMINED BY FIRE DISTRICT #8 DURING CONSTRUCTION.

**KEY NOTES**

- INSTALL CURB INLET
- DRAINAGE SWALE, SEE DETAIL 11, SHEET 15
- STOP & STREET SIGN(S)
- INSTALL 2'x2' INFILTRATION GALLERY. CONNECT TO ROOF DOWNSPOUTS. SEE DETAIL 9, SHEET 15.
- ACCESS GATE BY OWNER. CONTRACTOR SHALL INSTALL 6" TALL CURBS DELINEATING A 3' X 15' (MEASURED TO THE FACE OF CURBS) "ISLAND" NEAR THE WEST SIDE OF THE MAIN GATE, ON THE NORTH ROAD. THE EXACT LOCATION OF THE ISLAND IS TO BE DETERMINED BY THE OWNER PRIOR TO CONSTRUCTION. COORDINATE WITH OWNER FOR EXACT REQUIREMENTS. VEHICLE DETECTION SENSORS BY OWNER SHALL BE INSTALLED WITHIN THE ROAD BEFORE ASPHALT PAVING.
- PARKING STALLS (9'x20' EA.). PAVEMENT SECTION SHALL MATCH ADJACENT STREET, SLOPE (2%) BACK TOWARDS ROAD GUTTER.
- STREET IMPROVEMENTS FOR THE PHASE 1A TIME SCHEDULE SHALL EXTEND 10' EAST OF LOT 11. SEE OWNER'S SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- IRRIGATION/ELECTRICAL SLEEVES (TYPICAL). SEE WATER PLANS FOR REQUIREMENTS.

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.

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**UTILITY STATEMENT**  
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**SPOKANE COUNTY ENGINEERS OFFICE**  
OFFICIAL PUBLIC DOCUMENT ORIGINAL  
**CONSTRUCTION PLANS**  
PROJECT #:  
DATE ACCEPTED:  
ACCEPTANCE EXPIRES:  
PROJECT LANE MILES PUBLIC:  
PROJECT LANE MILES PRIVATE:  
CONTRACTOR DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE RECORDS AND DRAINAGE FACILITIES FOR MAINTENANCE. PERMIT REQUIRED! (509) 477-3500 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

*\* Grading on north plat boundary subject to temporary construction easement.*



Know what's below. Call before you dig.

**TBM INFORMATION**  
1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-319183

**SURVEY COORDINATES**  
1. SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.



*Robert P. Lewis*  
DEVELOPER'S APPROVAL DATE 2-25-16

**COFFMAN ENGINEERS**  
10 N. Post Street Suite 500  
Spokane, Washington 99201  
Tel 509 328 2994  
Fax 509 328 2999

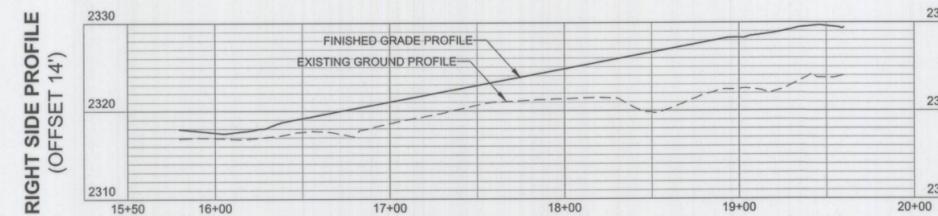
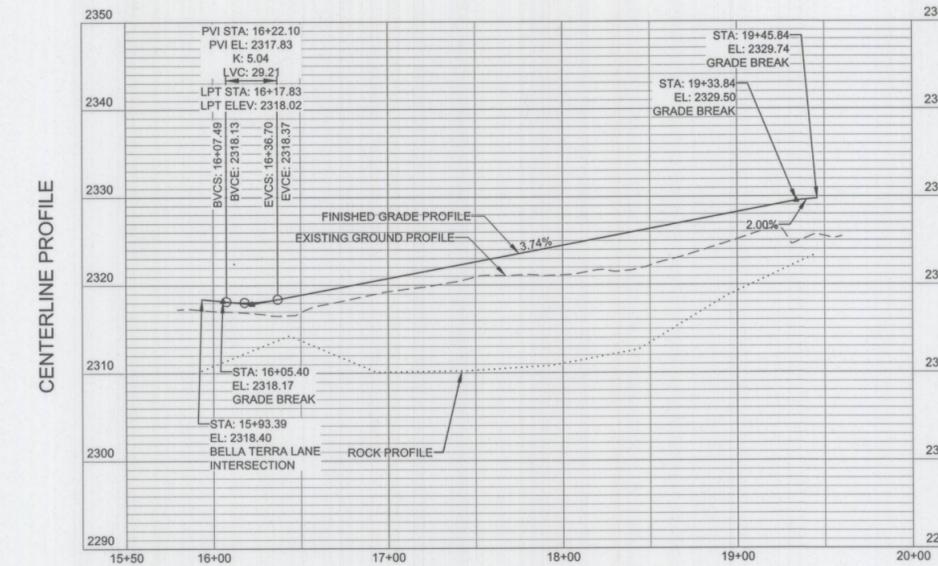
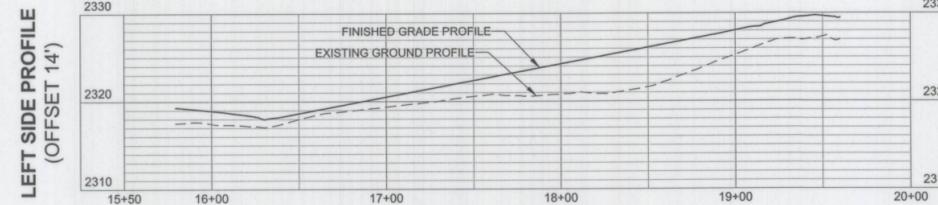
**BELLA TERRA LANE PHASE 1**

DRAWING TITLE  
**BELLA TERRA LANE**

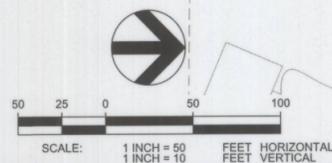
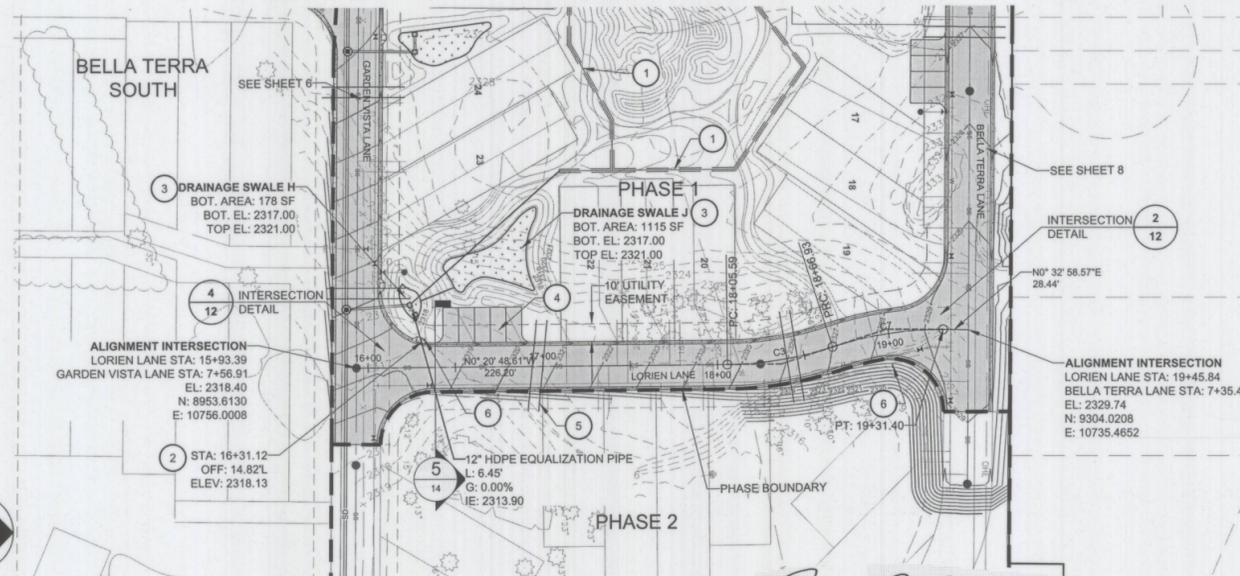
PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO.	8
DRAWN BY: TJW	REVIEWED BY: TLA		

**ABBREVIATIONS**

ACT	ACTUAL
EL	ELEVATION
BVCE	BEGINNING VERTICAL CURVATURE ELEVATION
BVCS	BEGINNING VERTICAL CURVATURE STATION
EVCE	ENDING VERTICAL CURVATURE ELEVATION
EVCS	ENDING VERTICAL CURVATURE STATION
HPT	HIGH POINT
IE	INVERT ELEVATION
L	LENGTH
LPT	LOW POINT
LVC	LENGTH OF VERTICAL CURVE
SD	STORM DRAIN
SS	SANITARY SEWER
STA	STATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL-CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
SDDW	STORM DRAIN DRYWELL
SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
WWA	WATER
TD	TRENCH DRAIN
DI	DUCTILE PIPE
BT	BELLA TERRA
PH2	PHASE 2
ST	STREET
AVE	AVENUE
TYP	TYPICAL
G	GRADE
OFF	OFFSET
N	NORTH
S	SOUTH
E	EAST
W	WEST
SDCO	STORMDRAIN CLEANOUT
R	RADIUS



CURVE TABLE						
CURVE #	RADIUS	LENGTH	CHORD BEARING	CHORD L	DELTA	TAN
C1	100.00	20.70	S83°25'23"E	20.66	11°51'35"	10.39
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C3	200.00	61.34	N9°07'58"W	61.10	17°34'19"	30.91
C4	360.31	71.45	N5°40'51"W	71.33	11°21'43"	35.84
C5	100.00	69.50	N19°54'35"E	68.11	39°49'10"	36.22
C6	100.00	68.54	N20°11'04"E	67.21	39°16'11"	35.68
C7	200.00	64.47	N8°41'04"W	64.19	18°28'06"	32.52



*Robert P. Curci*  
DEVELOPER'S APPROVAL  
2-25-16  
DATE

**NOTES**

- REFER TO SHEET 2 FOR GENERAL NOTES.
- STORM MANHOLES SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-2, MANHOLES SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-5, MANHOLE TYPE III-48.
- STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), WATER TIGHT, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M252 FOR PIPES WITH DIAMETERS OF 10 INCHES AND SMALLER AND AASHTO M294 FOR PIPES WITH DIAMETERS BETWEEN 12 INCHES TO 60 INCHES.
- CATCH BASINS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-4 WITH BI-DIRECTIONAL VANED GRATE PER WSDOT STANDARD PLAN B-30.40-01.
- CONTRACTOR TO MEET WITH OWNER ON SITE TO GET AUTHORIZATION PRIOR TO REMOVING OR POTENTIALLY DAMAGING ANY AND ALL EXISTING TREES.
- CURB INLETS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-8, CURB INLET TYPE 1.
- CONTRACTOR TO COORDINATE WITH OWNER FOR SCOPE OF WORK AND SCHEDULE OF FINE GRADING WITHIN THE GARDEN LIMITS.
- CONTRACTOR TO COORDINATE WITH OWNER FOR GRADING WITHIN AND AROUND LOTS 20-22. CONTRACTOR SHALL GRADE THE HOUSE PADS, BUT NOT THE DRIVEWAYS UNTIL REVIEWED BY AND FURTHER DIRECTION GIVEN BY THE OWNER.
- FIRE LANE - PARKING SIGNS ARE REQUIRED. THE EXACT LOCATION IS TO BE DETERMINED BY FIRE DISTRICT #8 DURING CONSTRUCTION.

**KEY NOTES**

- INSTALL 2'x2' INFILTRATION GALLERY, CONNECT TO ROOF DOWNSPOUTS. SEE DETAIL 9, SHEET 15.
- INSTALL CURB INLET
- UNDERDRAINED DRAINAGE SWALE, SEE DETAIL 12, SHEET 15
- PARKING STALLS (9'x20' EA.), PAVEMENT SECTION SHALL MATCH ADJACENT STREET, SLOPE (2%) BACK TOWARDS ROAD GUTTER.
- IRRIGATION/ELECTRICAL SLEEVES (TYPICAL), SEE WATER PLANS FOR REQUIREMENTS.
- STREET SIGN(S)

**SPOKANE COUNTY ENGINEERS OFFICE**  
OFFICIAL PUBLIC DOCUMENT ORIGINAL  
**CONSTRUCTION PLANS**  
PROJECT #: 15-2025  
DATE ACCEPTED: 03/23/16  
ACCEPTANCE EXPIRES: 12/31/19  
PROJECT LANE MILES PUBLIC: 2.74  
PROJECT LANE MILES PRIVATE: .74  
RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
PERMIT REQUIRED! (509) 477-3600  
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

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Know what's below.  
Call before you dig.

**TBM INFORMATION**

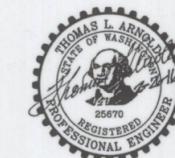
- SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL: 2318.63

**SURVEY COORDINATES**

- SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.

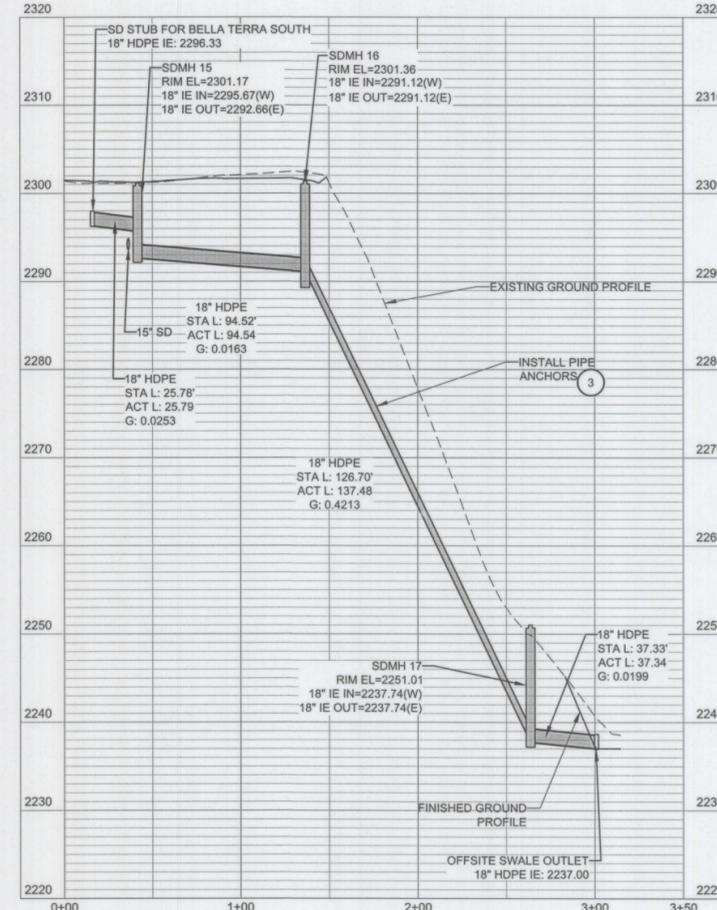
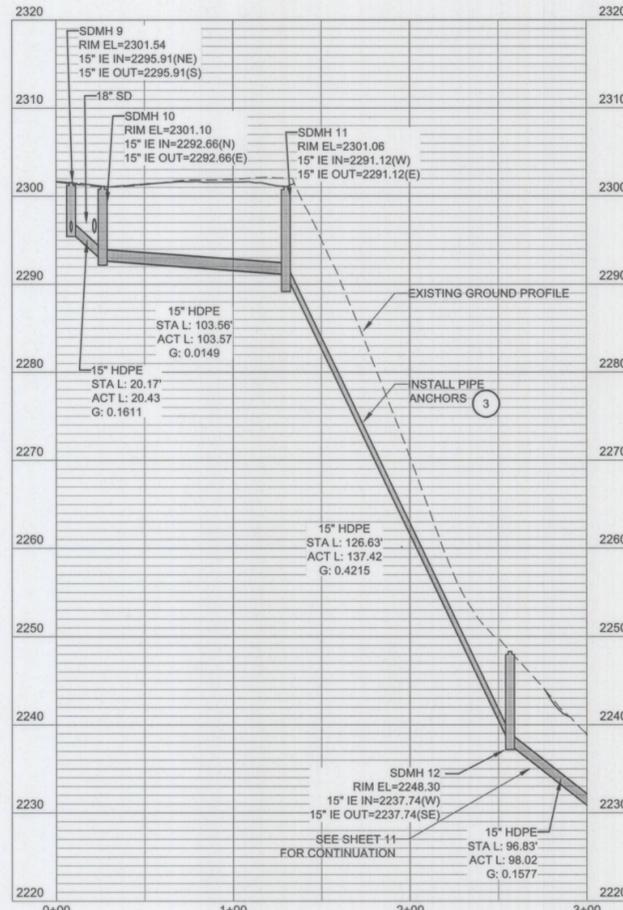
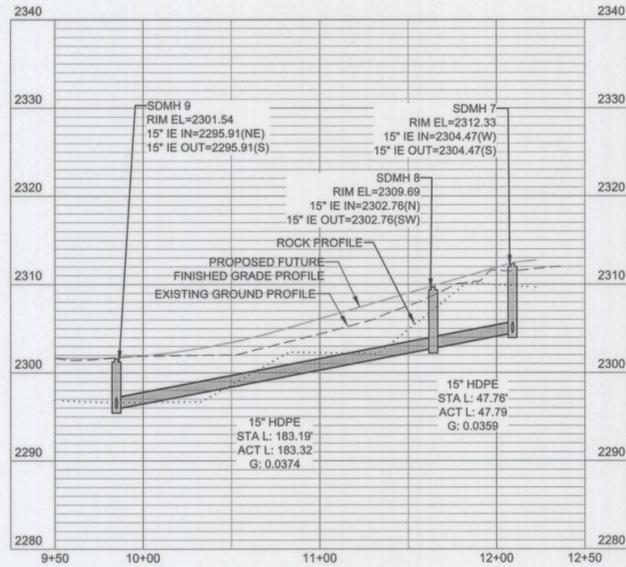
**COFFMAN ENGINEERS**  
10 N. Post Street Suite 500  
Spokane, Washington 99201  
Tel 509 328 2994  
Fax 509 328 2999

<b>BELLA TERRA PUD PHASE 1</b>			
<b>LORIE LANE</b>			
DRAWING TITLE			
PROJECT NO. 150401			
SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.	
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO.	
DRAWN BY: TJW	REVIEWED BY: TLA	9	



**ABBREVIATIONS**

ACT	ACTUAL
EL	ELEVATION
BVCE	BEGINNING VERTICAL CURVATURE ELEVATION
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EVCE	ENDING VERTICAL CURVATURE ELEVATION
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WVA	WATER
TD	TRENCH DRAIN
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BT	BELLA TERRA
PH2	PHASE 2
ST	STREET
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G	GRADE
OFF	OFFSET
N	NORTH
S	SOUTH
E	EAST
W	WEST
SDCO	STORM DRAIN CLEANOUT
R	RADIUS



**NOTES**

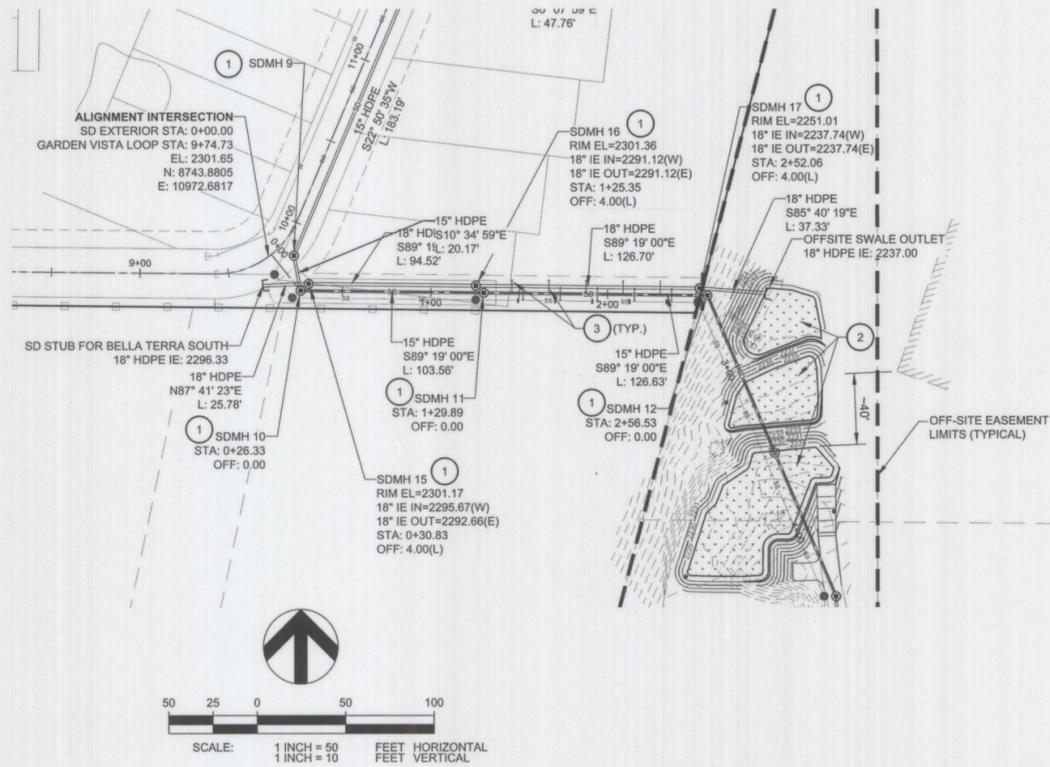
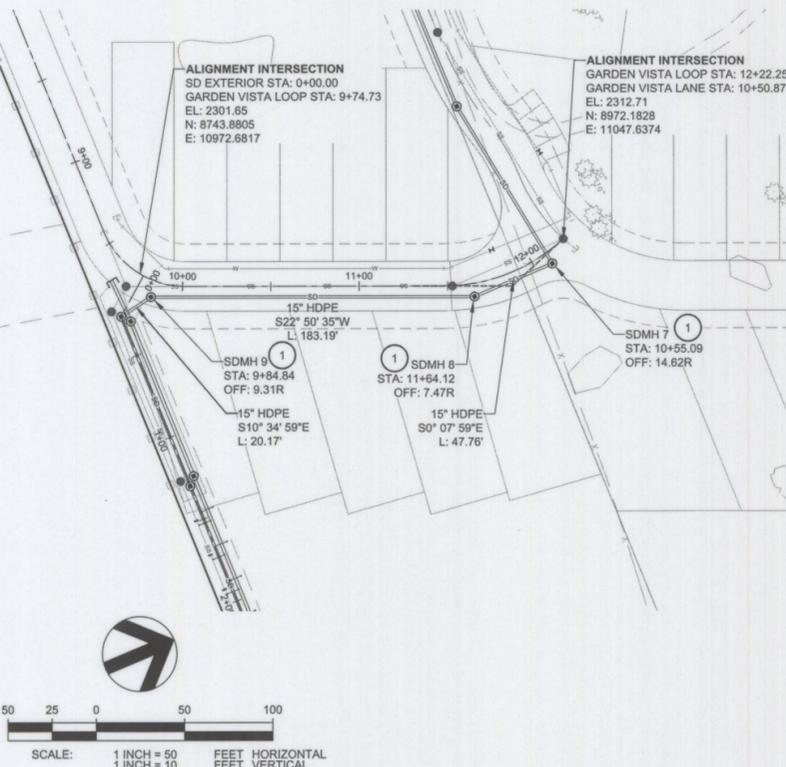
- REFER TO SHEET 2 FOR GENERAL NOTES.
- STORM MANHOLES SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-2, MANHOLE I-4B. MANHOLES WITH DEPTHS BETWEEN 4' & 6' SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-5, MANHOLE TYPE III-4B.
- STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), WATERTIGHT, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M252 FOR PIPES WITH DIAMETERS OF 10 INCHES AND SMALLER AND AASHTO M294 FOR PIPES WITH DIAMETERS BETWEEN 12 INCHES TO 60 INCHES.
- DRYWELLS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-1, "DRYWELL TYPE B".
- CORRUGATED PIPE ANCHORS SHALL COMPLY WITH CITY OF SPOKANE STANDARD PLAN B-117A.
- CONTRACTOR TO MEET WITH OWNER ON SITE TO GET AUTHORIZATION PRIOR TO REMOVING OR POTENTIALLY DAMAGING ANY AND ALL EXISTING TREES.

**KEY NOTES**

- INSTALL STORM DRAIN MANHOLE
- TIERED OFFSITE SWALE. SEE SHEET 11
- INSTALL CORRUGATED PIPE ANCHORS, SEE NOTE 5. SPACING PER TABLE BELOW

PIPE SLOPE	MAX PIPE ANCHOR SPACING
20% TO 35%	36'
35% TO 50%	24'
50% AND OVER	16'

REF: ISPW SD-510



**SPOKANE COUNTY ENGINEERS OFFICE**  
**OFFICIAL PUBLIC DOCUMENT ORIGINAL**  
**CONSTRUCTION PLANS**  
 PROJECT #: 23-235  
 DATE ACCEPTED: 03-23-16  
 ACCEPTANCE EXPIRES: 03-23-18  
 PROJECT LANE MILES PUBLIC: 0.0  
 PROJECT LANE MILES PRIVATE: 0.0  
 CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
 PERMIT REQUIRED! (509) 477-3000  
 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.

THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

**UTILITY STATEMENT**  
 LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.



Know what's below.  
 Call before you dig.  
**TBM INFORMATION**  
 1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL=2319.63

**SURVEY COORDINATES**  
 1. SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.

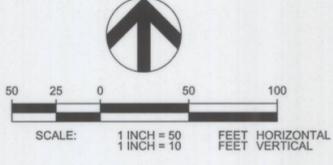
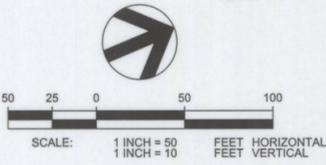
**COFFMAN ENGINEERS**  
 10 N. Post Street Suite 500  
 Spokane, Washington 99201  
 Tel 509 328 2994  
 Fax 509 328 2999

**BELLA TERRA PUD PHASE 1**

**SD EXTERIOR P&P**

PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWN BY: TJW	DRAWING NO. 10

*Thomas L. Arnold*  
 DEVELOPER'S APPROVAL  
 DATE: 2-28-16



**ABBREVIATIONS**

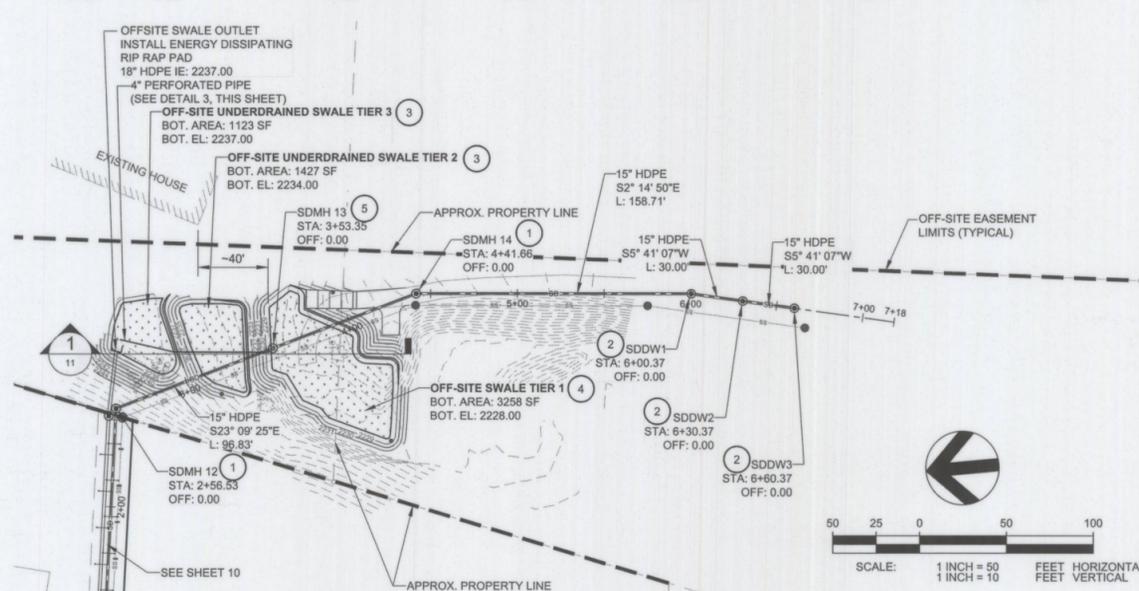
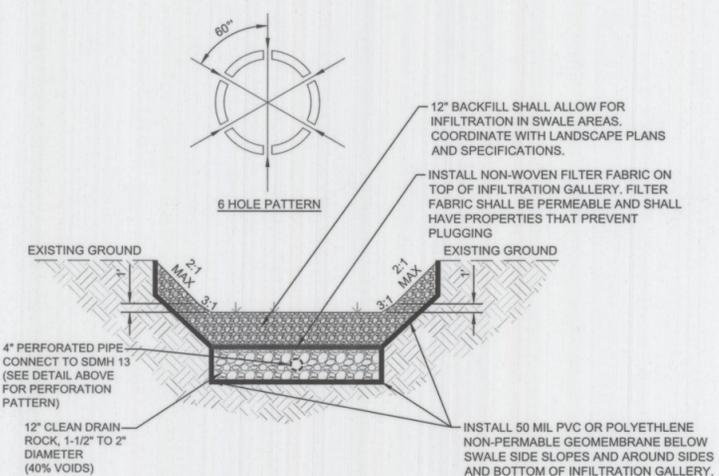
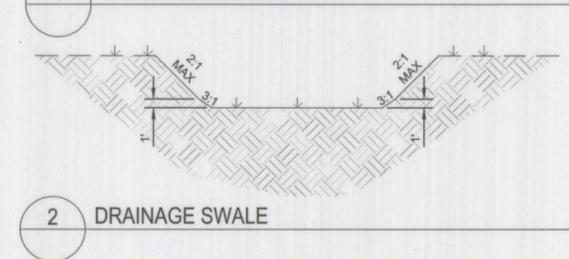
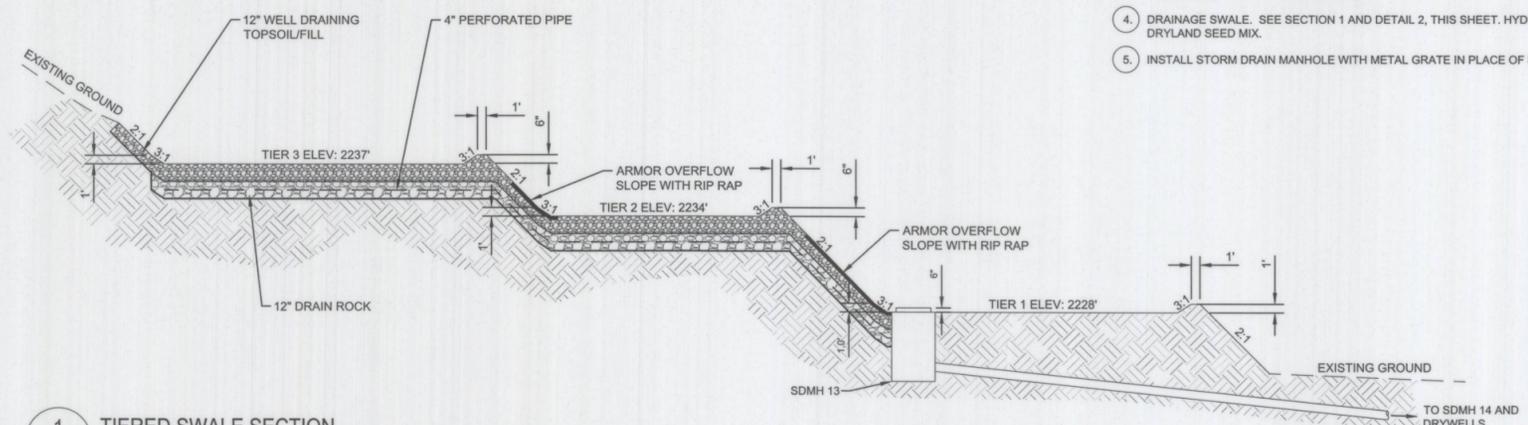
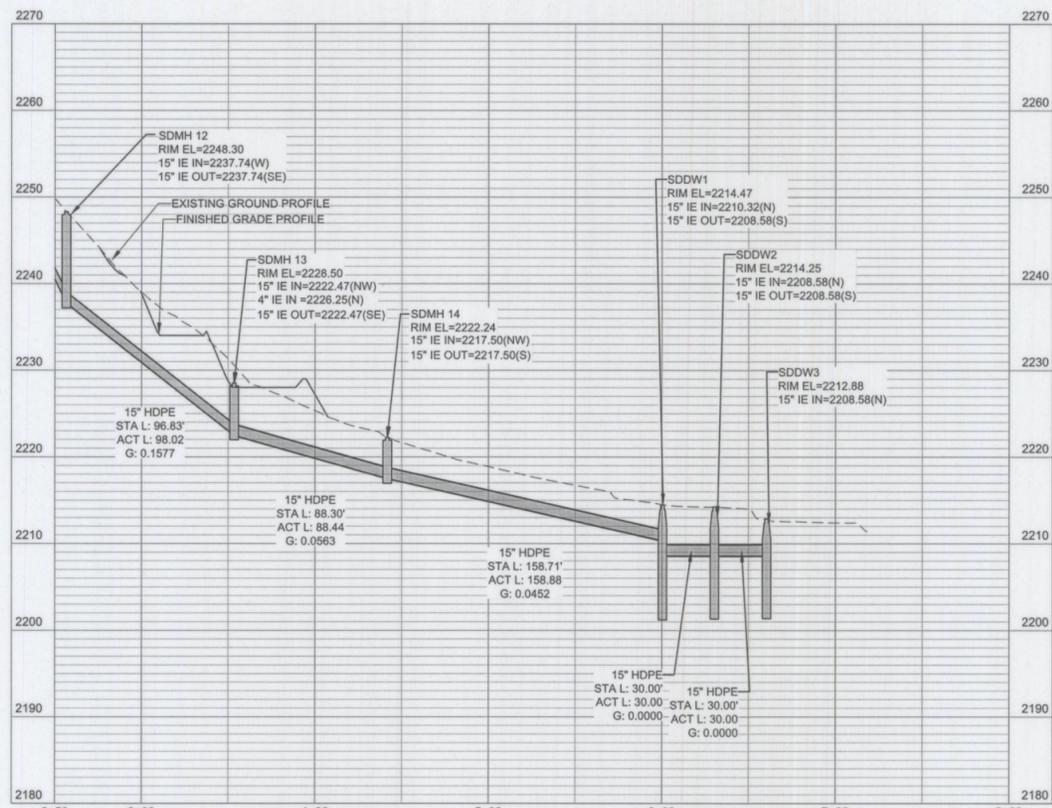
ACT	ACTUAL
EL	ELEVATION
BVCS	BEGINNING VERTICAL CURVATURE ELEVATION
EVCS	ENDING VERTICAL CURVATURE ELEVATION
EVCS	ENDING VERTICAL CURVATURE STATION
HPT	HIGH POINT
IE	INVERT ELEVATION
L	LENGTH
LPT	LOW POINT
LVC	LENGTH OF VERTICAL CURVE
SD	STORM DRAIN
SS	SANITARY SEWER
STA	STATION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL-CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
SDDW	STORM DRAIN DRYWELL
SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
WWA	WATER
TD	TRENCH DRAIN
DI	DUCTILE PIPE
BT	BELLA TERRA
PH2	PHASE 2
ST	STREET
AVE	AVENUE
TYP	TYPICAL
G	GRADE
OFF	OFFSET
N	NORTH
S	SOUTH
E	EAST
W	WEST
SDCO	STORMDRAIN CLEANOUT
R	RADIUS

**NOTES**

- REFER TO SHEET 2 FOR GENERAL NOTES.
- STORM MANHOLES SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-2, MANHOLE I-48. MANHOLES WITH DEPTHS BETWEEN 4' & 6' SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN U-5, MANHOLE TYPE III-48.
- STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), WATERTIGHT, WITH SMOOTH WATERWAY FOR COUPLING JOINTS, AASHTO M252 FOR PIPES WITH DIAMETERS OF 10 INCHES AND SMALLER AND AASHTO M284 FOR PIPES WITH DIAMETERS BETWEEN 12 INCHES TO 60 INCHES.
- DRYWELLS SHALL COMPLY WITH SPOKANE COUNTY STANDARD PLAN B-1, "DRYWELL TYPE B".
- CONTRACTOR TO MEET WITH OWNER ON SITE TO GET AUTHORIZATION PRIOR TO REMOVING OR POTENTIALLY DAMAGING ANY AND ALL EXISTING TREES.
- CONTRACTOR TO COORDINATE WITH OWNER FOR SCOPE OF WORK AND SCHEDULE OF FINE GRADING WITHIN THE GARDEN LIMITS.
- METAL GRATES SHALL CONFORM TO SPOKANE COUNTY STANDARD PLAN B-15, "METAL GRATE - TYPE 4".
- RIP RAP SHALL BE 1.5" DIAMETER MINIMUM, 6" DIAMETER AVERAGE AND 8.3" DIAMETER MAXIMUM INSTALLED 1.0' DEEP.

**KEY NOTES**

- INSTALL STORM DRAIN MANHOLE
- INSTALL DOUBLE-DEPTH DRYWELL
- UNDERDRAINED DRAINAGE SWALE. SEE SECTION 1 AND DETAIL 3, THIS SHEET. HYDROSEED WITH DRYLAND SEED MIX.
- DRAINAGE SWALE. SEE SECTION 1 AND DETAIL 2, THIS SHEET. HYDROSEED WITH DRYLAND SEED MIX.
- INSTALL STORM DRAIN MANHOLE WITH METAL GRATE IN PLACE OF SOLID COVER.



**SPOKANE COUNTY ENGINEERS OFFICE**  
OFFICIAL PUBLIC DOCUMENT ORIGINAL CONSTRUCTION PLANS  
PROJECT #: 23-23-24  
DATE ACCEPTED: 02-23-24  
ACCEPTANCE EXPIRES: 03-23-28  
PROJECT LANE MILES PUBLIC: 0.2  
PROJECT LANE MILES PRIVATE: 0.2  
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, AS-BUILT AND REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE. PERMIT REQUIRED! (509) 477-3500 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

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**UTILITY STATEMENT**  
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**811**  
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1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL: 2319.63

**SURVEY COORDINATES**  
1. SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM.

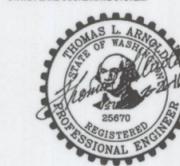
**COFFMAN ENGINEERS**  
10 N. Post Street Suite 500  
Spokane, Washington 99201  
Tel 509 328 2994  
Fax 509 328 2999

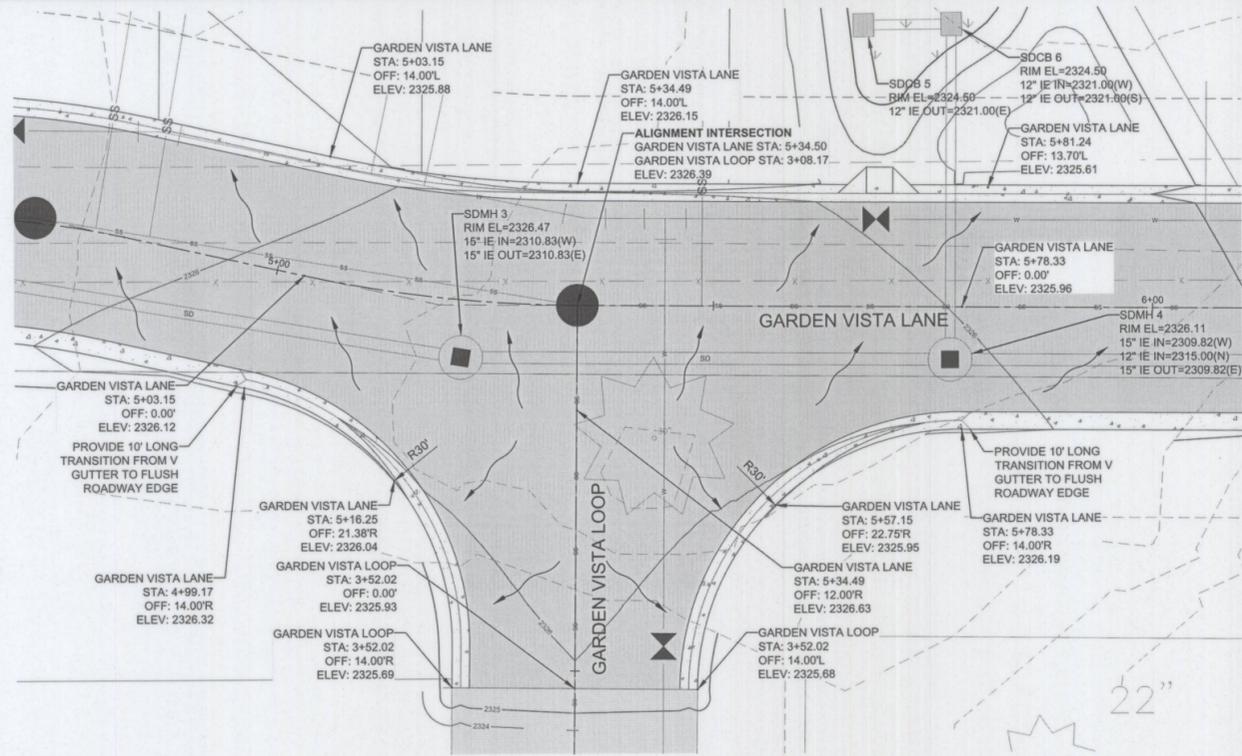
**BELLA TERRA PUD PHASE 1**

**SD EXTERIOR P&P**

PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO. 11	
DRAWN BY: TJW	REVIEWED BY: TLA		

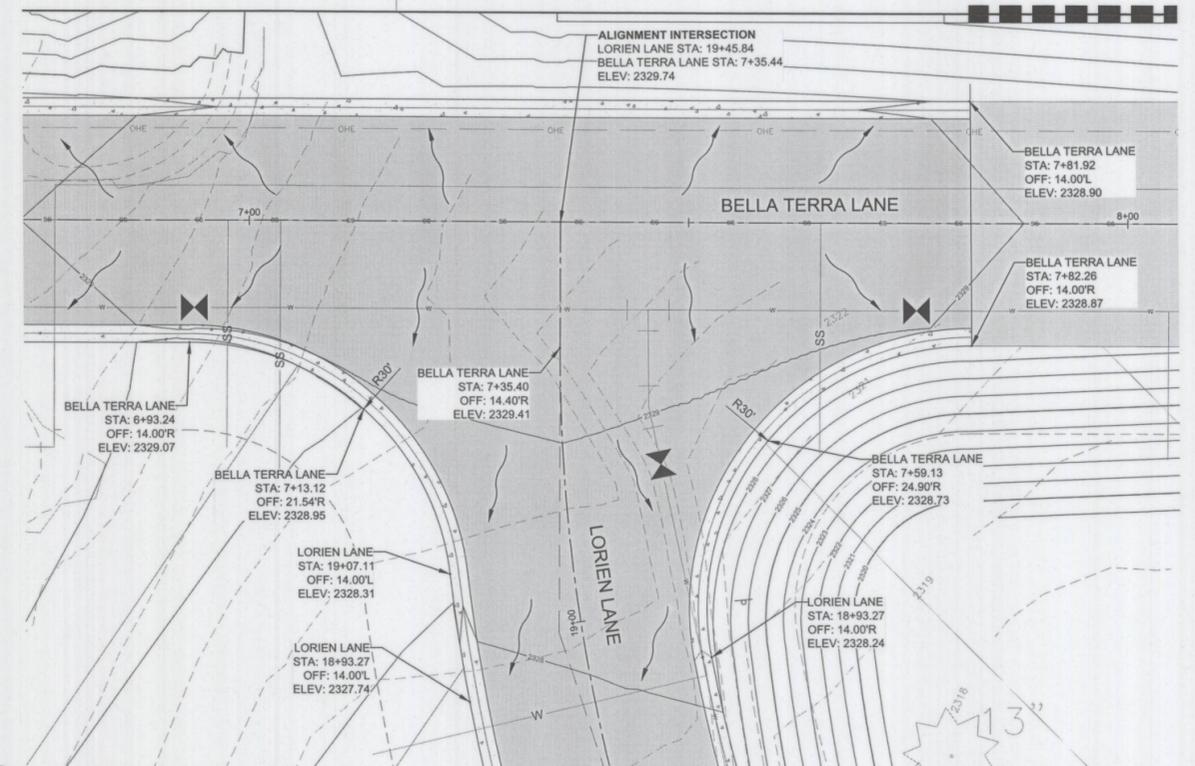
*Ray P. Lewis*  
DEVELOPER'S APPROVAL  
DATE: 2-28-16





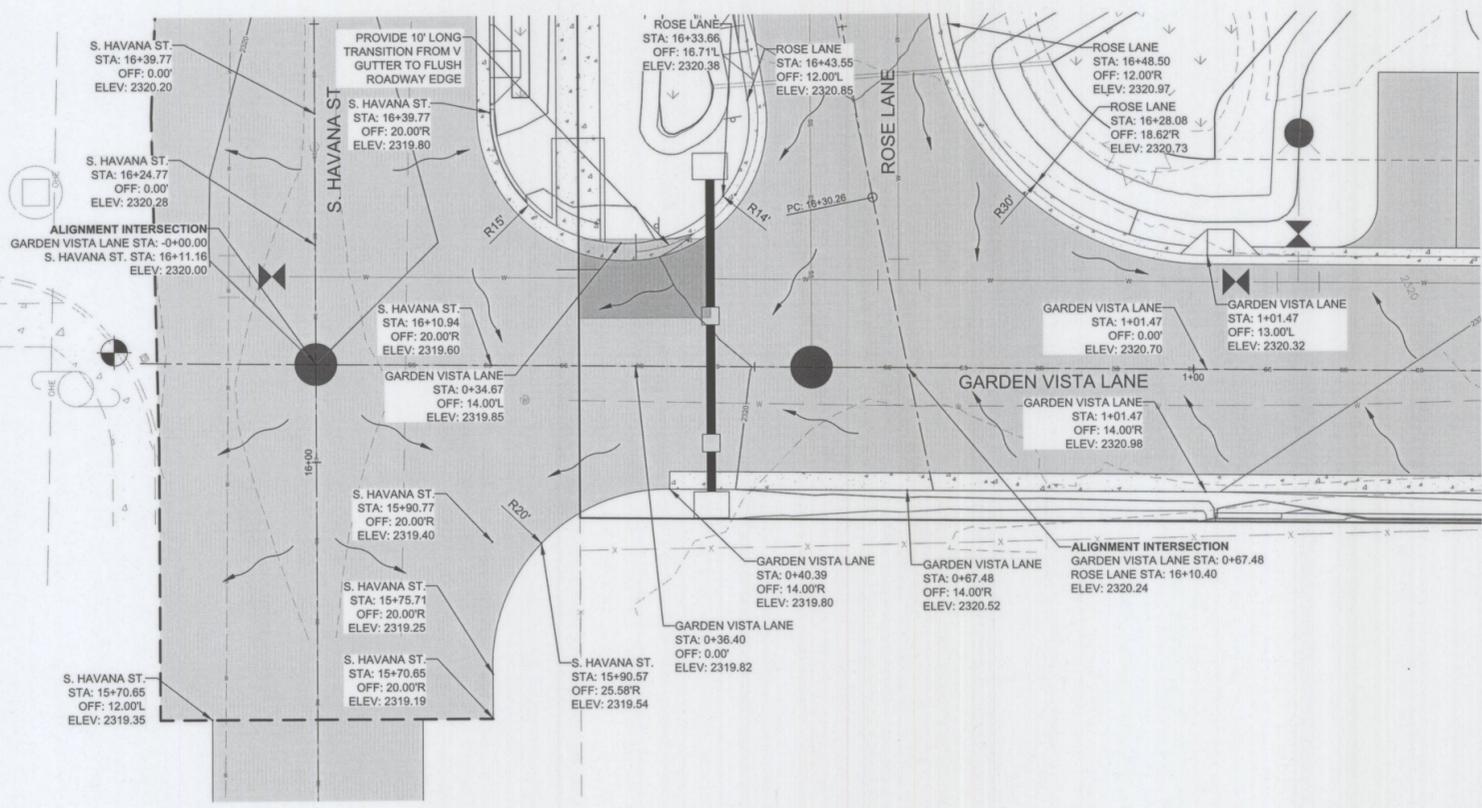
1 INTERSECTION DETAIL  
6 GARDEN VISTA LANE & GARDEN VISTA LOOP

SCALE: 1" = 10'



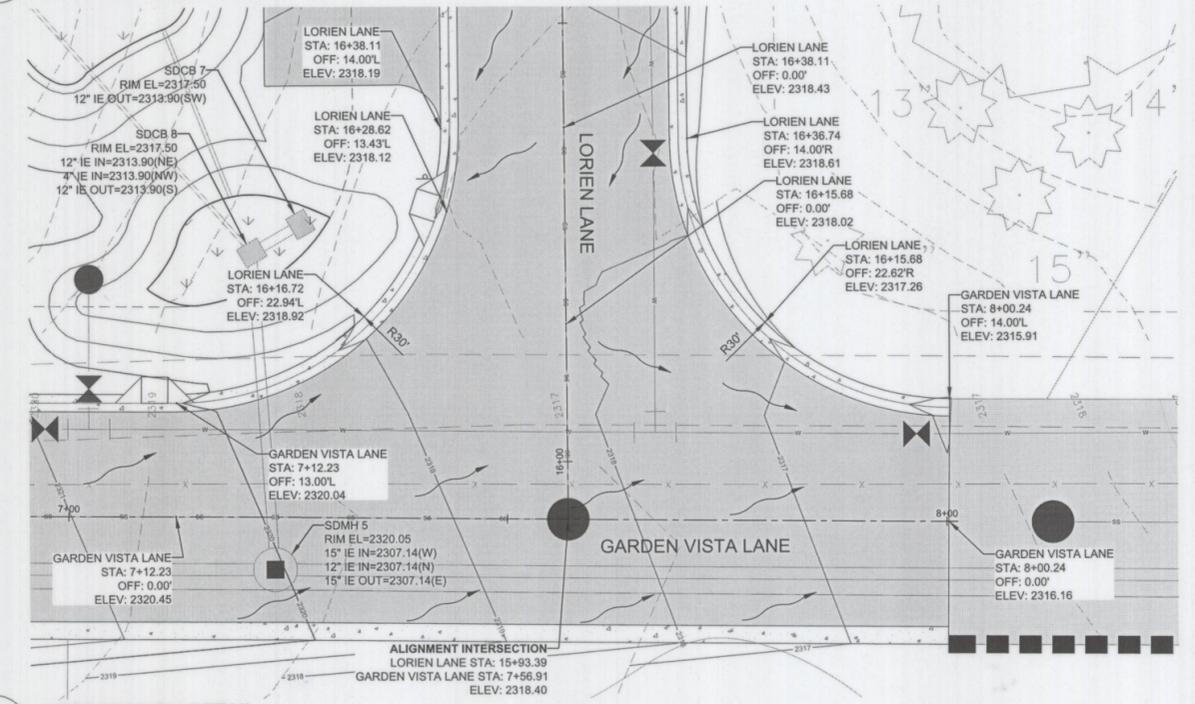
2 INTERSECTION DETAIL  
8,9 BELLA TERRA LANE & LORIEN LANE

SCALE: 1" = 10'



3 INTERSECTION DETAIL  
5,6,7 ROSE LANE & GARDEN VISTA LANE, S. HAVANA & GARDEN VISTA LANE

SCALE: 1" = 10'



4 INTERSECTION DETAIL  
6,9 GARDEN VISTA LANE & LORIEN LANE

SCALE: 1" = 10'

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**SPOKANE COUNTY ENGINEERS OFFICE**  
OFFICIAL PUBLIC DOCUMENT ORIGINAL  
**CONSTRUCTION PLANS**  
PROJECT #: 15-1025  
DATE ACCEPTED: 02-25-16  
ACCEPTANCE EXPIRES: 02-25-18  
PROJECT LANE MILES PUBLIC: 0.0  
PROJECT LANE MILES PRIVATE: 0.0  
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE FLOODS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
PERMIT REQUIRED! (509) 477-3000  
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION



Know what's below.  
Call before you dig.

TBM INFORMATION

- SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL+2319.63



**SURVEY COORDINATES**  
SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM

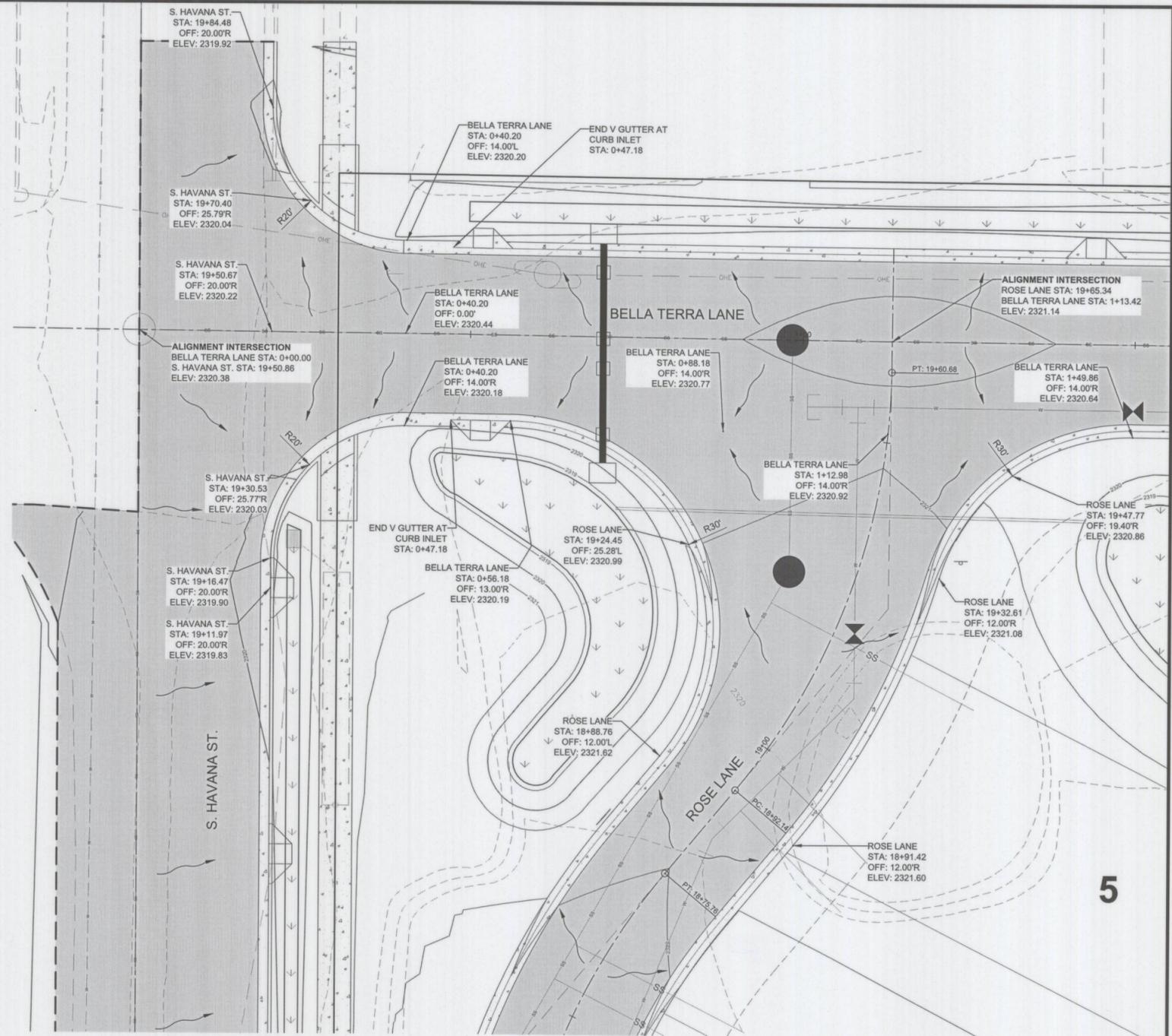
DEVELOPER'S APPROVAL: *Ron P. Luis* DATE: 2-25-16

**COFFMAN ENGINEERS**  
10 N. Post Street Suite 500  
Spokane, Washington 99201  
Tel 509 328 2994  
Fax 509 328 2999

**BELLA TERRA PUD PHASE 1**

DRAWING TITLE: INTERSECTION DETAILS

PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO. 12	
DRAWN BY: TJW	REVIEWED BY: TLA		



5 INTERSECTION DETAIL  
 5.7,8 ROSE LANE & BELLA TERRA LANE, S. HAVANA & BELLA TERRA LANE

SCALE: 1" = 10'

THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.  
 THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

**SPOKANE COUNTY ENGINEERS OFFICE**  
**OFFICIAL PUBLIC DOCUMENT ORIGINAL**  
**CONSTRUCTION PLANS**  
 PROJECT #: 15-2245  
 DATE ACCEPTED: 03-23-16  
 ACCEPTANCE EXPIRES: 03-23-18  
 PROJECT LANE MILES PUBLIC: 0.4  
 PROJECT LANE MILES PRIVATE: 0.4  
 CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE FRONT AND DRAINAGE FACILITIES FOR MAINTENANCE.  
 PERMIT REQUIRED! (509) 477-3600  
 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

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- TBM INFORMATION**
- SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-2319.83
- SURVEY COORDINATES**
- SURVEY COORDINATE SYSTEM IS NOT STATE PLANE COORDINATE SYSTEM



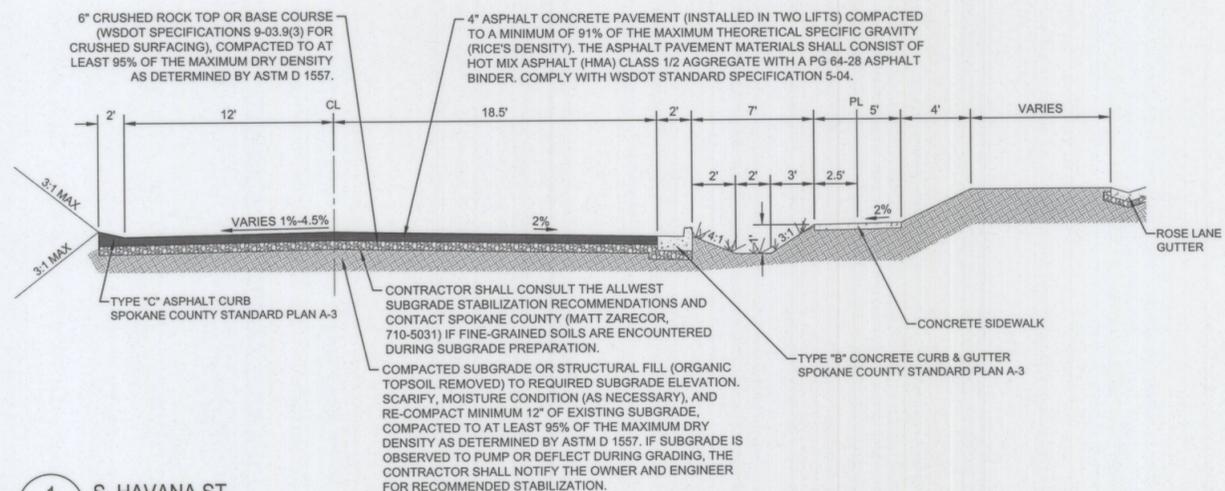
Know what's below.  
 Call before you dig.



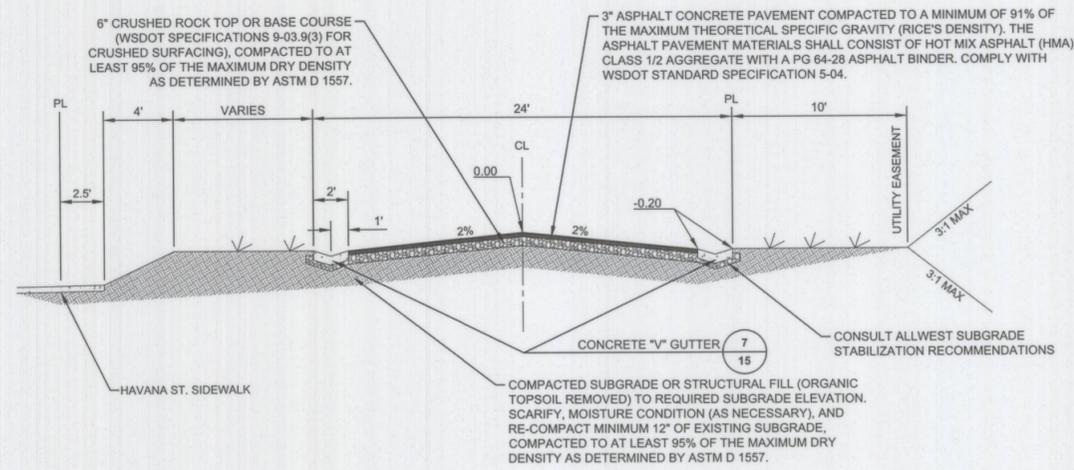
*Thomas L. Aronoff*  
 2-28-16  
 DEVELOPER'S APPROVAL DATE

**COFFMAN ENGINEERS**  
 10 N. Post Street Suite 500  
 Spokane, Washington 99201  
 Tel 509 328 2994  
 Fax 509 328 2999

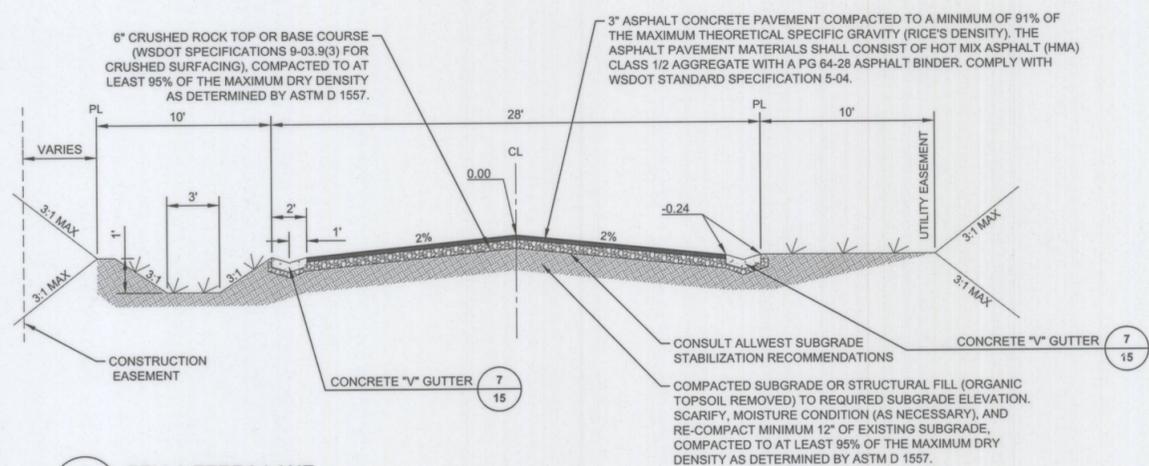
BELLA TERRA PUD PHASE 1			
DRAWING TITLE INTERSECTION DETAILS			
PROJECT NO. 150401	SCALE AS NOTED	DATE 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO. 13	
DRAWN BY: TJW	REVIEWED BY: TLA		



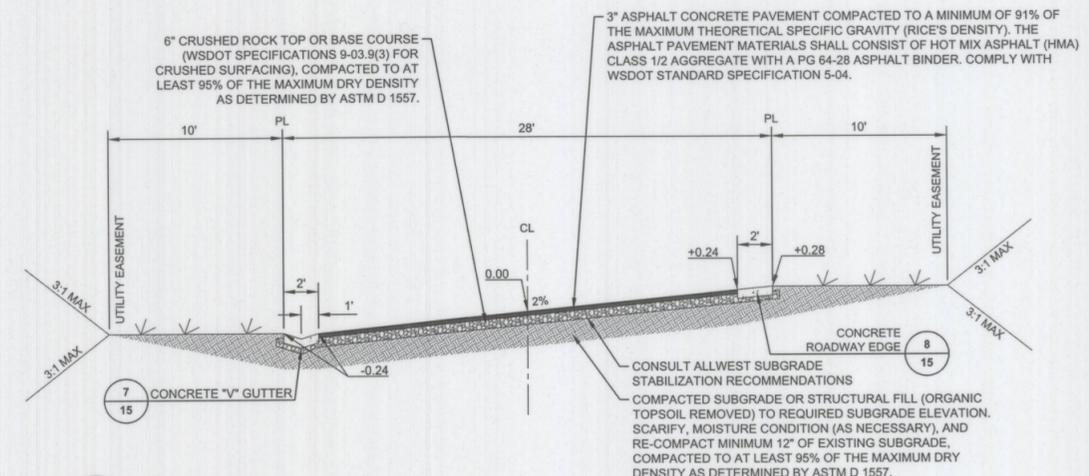
**1 S. HAVANA ST.**  
TYPICAL SECTION  
SCALE: NTS



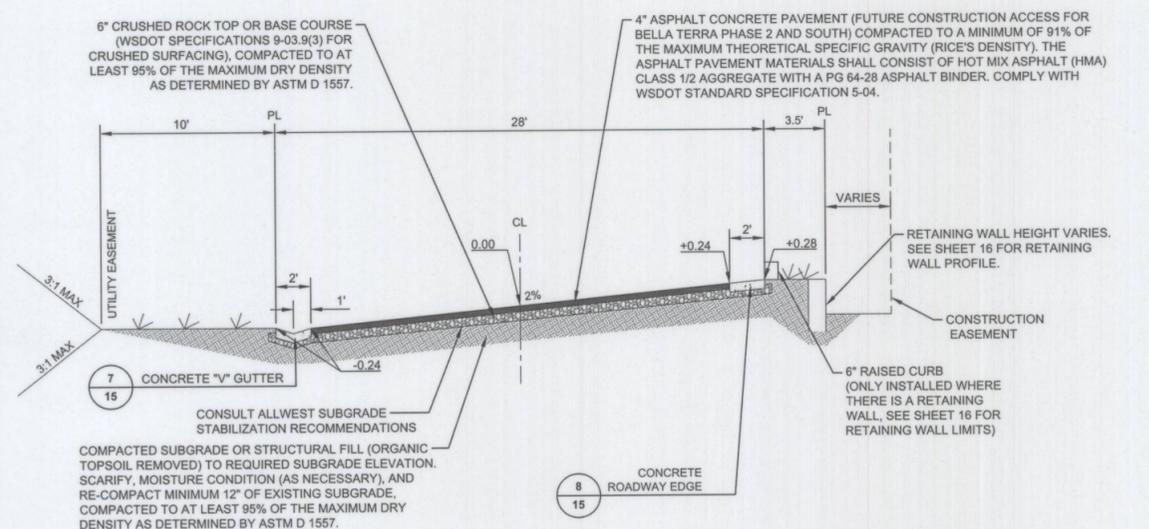
**4 ROSE LANE**  
TYPICAL SECTION  
SCALE: NTS



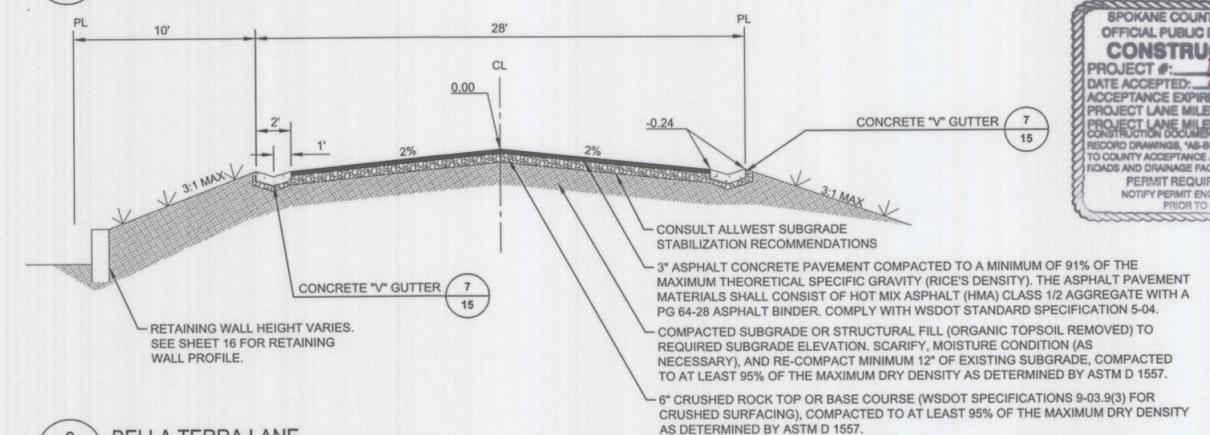
**2 BELLA TERRA LANE**  
TYPICAL SECTION  
SCALE: NTS



**5 LORIEN LANE**  
TYPICAL SECTION  
SCALE: NTS



**3 GARDEN VISTA LANE**  
TYPICAL SECTION  
SCALE: NTS



**6 BELLA TERRA LANE**  
RETAINING WALL SECTION  
SCALE: NTS

**SPOKANE COUNTY ENGINEERS OFFICE**  
OFFICIAL PUBLIC DOCUMENT ORIGINAL  
**CONSTRUCTION PLANS**  
PROJECT #: 15-0401  
DATE ACCEPTED: 2-25-16  
ACCEPTANCE EXPIRES: 05-25-17  
PROJECT LANE MILES PUBLIC: 0.0  
PROJECT LANE MILES PRIVATE: 0.0  
RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROAD AND DRAINAGE FACILITIES FOR MAINTENANCE.  
PERMIT REQUIRED! (509) 477-9500  
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

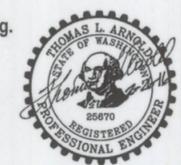
- NOTES:**
- PLACE ACCEPTABLE SOIL MATERIAL IN LAYERS TO REQUIRED SUBGRADE ELEVATIONS.
  - MATERIAL AND COMPACTION REQUIREMENTS SHALL CONFORM WITH WSDOT STANDARDS AND GEOTECHNICAL ENGINEERING RECOMMENDATIONS ASSOCIATED WITH SUBJECT SITE.
  - IF EXISTING SUBGRADE SOIL CONDITIONS INHIBIT PROPER COMPACTION, IT MAY BE NECESSARY TO OVEREXCAVATE AND REPLACE SOIL WITH APPROVED ONSITE MATERIAL OR IMPORTED MATERIAL. COORDINATE WITH THE GEOTECHNICAL ENGINEER.
  - POST PAVING ADJUSTMENT OF UTILITIES IS NOT ALLOWED. ALL UTILITIES WITHIN THE PAVING LIMITS SHALL BE PRE-ADJUSTED/RAISED BEFORE PAVING.

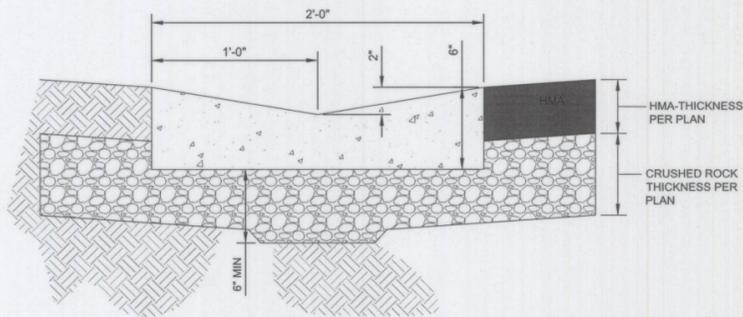


**TBM INFORMATION**  
1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL+2319.83

*R. P. Luis*  
DEVELOPER'S APPROVAL  
DATE: 2-25-16

<b>COFFMAN ENGINEERS</b>		10 N. Post Street Suite 500 Spokane, Washington 99201 Tel 509 328 2994 Fax 509 328 2999	
<b>BELLA TERRA PUD PHASE 1</b>			
<b>DETAILS</b>			
PROJECT NO. 150401	SCALE AS NOTED	DATE 2/8/2016	REVISION NO.
DESIGNED BY CBM	CHECKED BY CBM	DRAWING NO. 14	
DRAWN BY TJW	REVIEWED BY TLA		



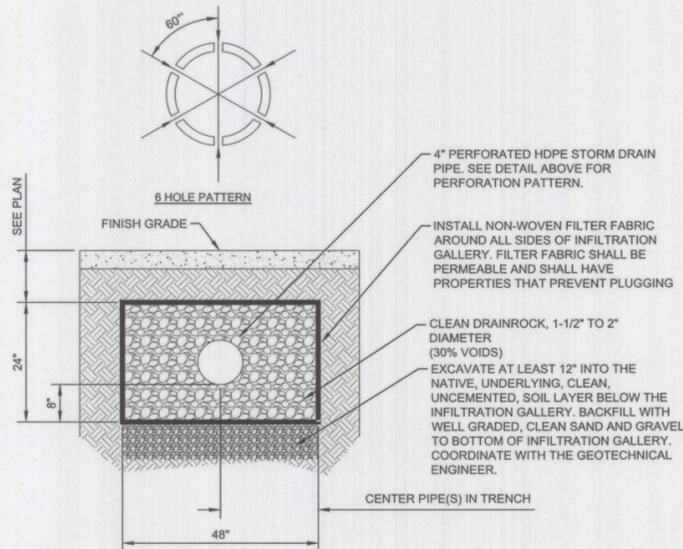


**NOTES:**

1. CONCRETE GUTTER SHALL BE CONSTRUCTED USING 3000 PSI, AIR-ENTRAINED CONCRETE.
2. EXPANSION (ISOLATION) JOINTS SHALL USE A 3/8" MIN PREMOLDED JOINT FILLER PER SEC 9-04.1(2). JOINTS SHALL EXTEND THROUGH THE FULL CROSS-SECTION OF THE GUTTER AND PLACED BETWEEN EXISTING AND NEW CONCRETE WHERE SIDEWALKS, DRIVEWAYS, AND GUTTER ARE REMOVED FOR NEW CONSTRUCTION. A TOOLED CONTRACTION (CONTROL) JOINT SHALL BE PLACED ACROSS THE GUTTER AND SPACED AT A MAX. 12'-0" O.C.

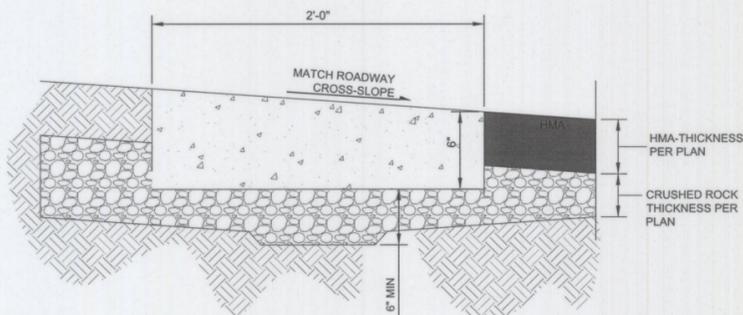
7 CONCRETE "V" GUTTER

SCALE: NTS



10 INFILTRATION GALLERY

SCALE: NTS

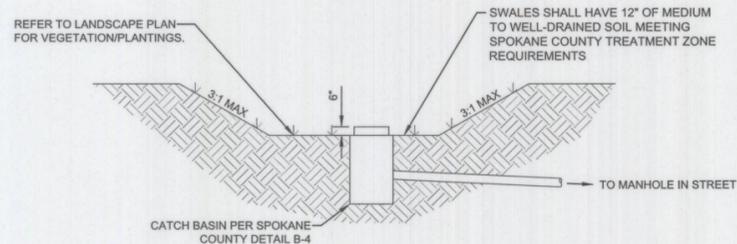


**NOTES:**

1. CONCRETE ROADWAY EDGE SHALL BE CONSTRUCTED USING 3000 PSI, AIR-ENTRAINED CONCRETE.
2. EXPANSION (ISOLATION) JOINTS SHALL USE A 3/8" MIN PREMOLDED JOINT FILLER PER SEC 9-04.1(2). JOINTS SHALL EXTEND THROUGH THE FULL CROSS-SECTION OF THE GUTTER AND PLACED BETWEEN EXISTING AND NEW CONCRETE WHERE SIDEWALKS, DRIVEWAYS AND GUTTER ARE REMOVED FOR NEW CONSTRUCTION. A TOOLED CONTRACTION (CONTROL) JOINT SHALL BE PLACED ACROSS THE GUTTER AND SPACED AT A MAX. 12'-0" O.C.

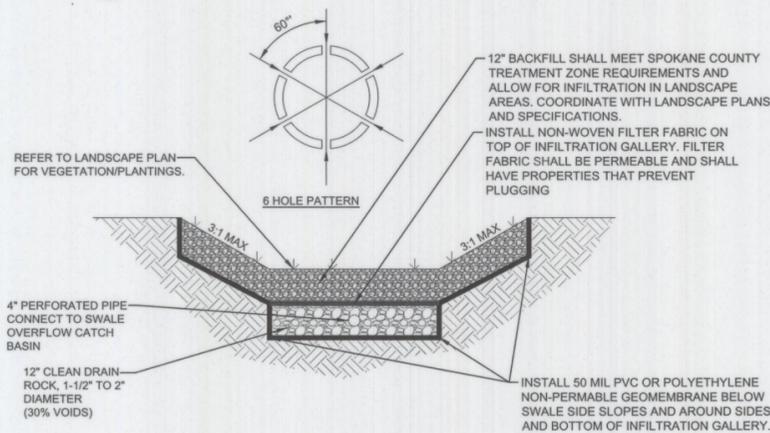
8 CONCRETE ROADWAY EDGE

SCALE: NTS



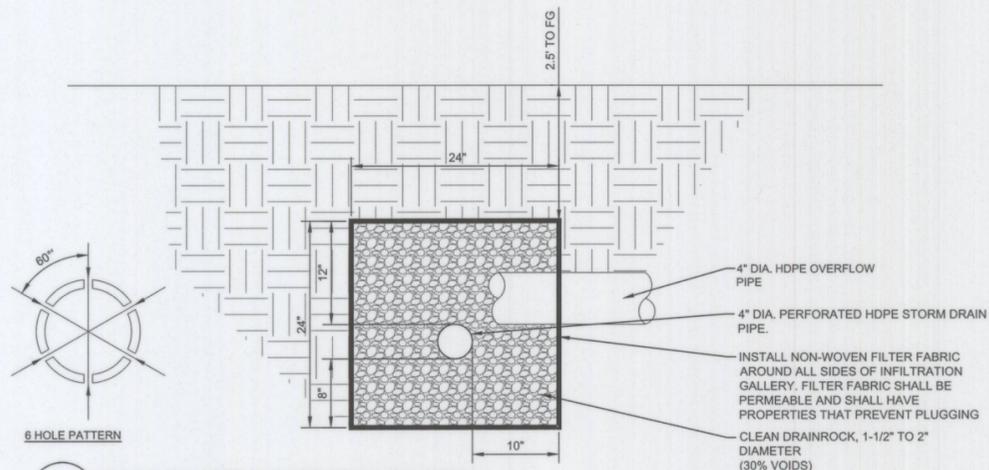
11 TYPICAL DRAINAGE SWALE

SCALE: NTS



12 TYPICAL UNDERDRAINED DRAINAGE SWALE

SCALE: NTS



9 ROOF RUNOFF INFILTRATION GALLERY

SCALE: NTS

13 NOT USED

SCALE: NTS

14 NOT USED

SCALE: NTS

15 NOT USED

SCALE: NTS

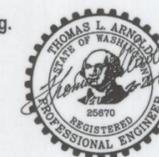
**SPOKANE COUNTY ENGINEERS OFFICE**  
**OFFICIAL PUBLIC DOCUMENT ORIGINAL**  
**CONSTRUCTION PLANS**  
 PROJECT #: 17-30225  
 DATE ACCEPTED: 12-23-16  
 ACCEPTANCE EXPIRES: 2-3-23-18  
 PROJECT LANE MILES PUBLIC: 7.7  
 PROJECT LANE MILES PRIVATE: 7.7  
 CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.  
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 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION.

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.



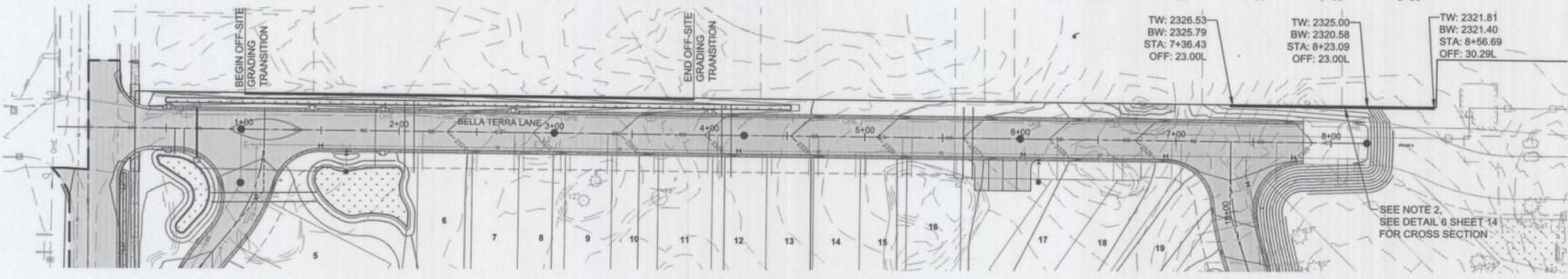
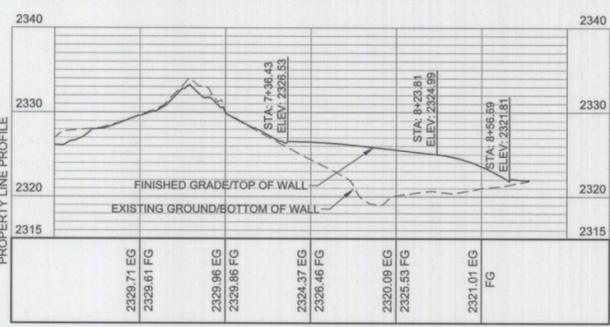
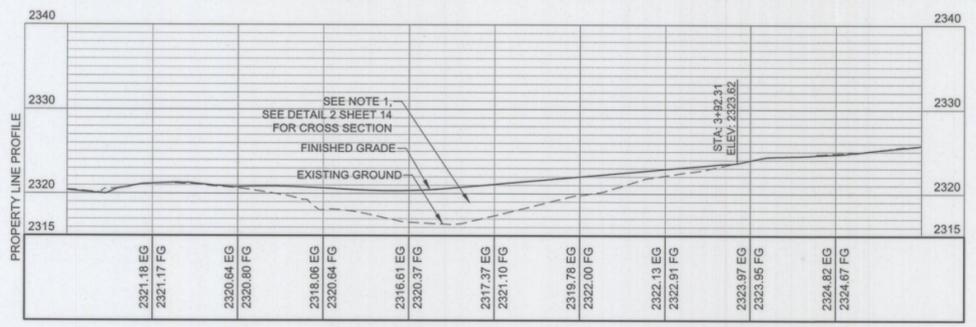
Know what's below.  
Call before you dig.

**TBM INFORMATION**  
 1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-2319.63



Developer's Approval: *Thomas L. Arnold* 2-28-16 DATE

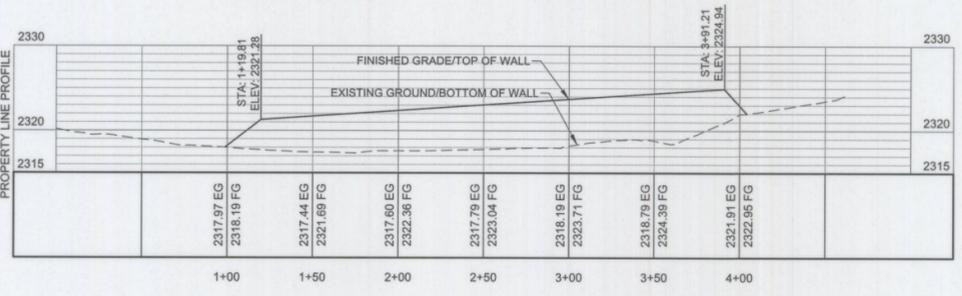
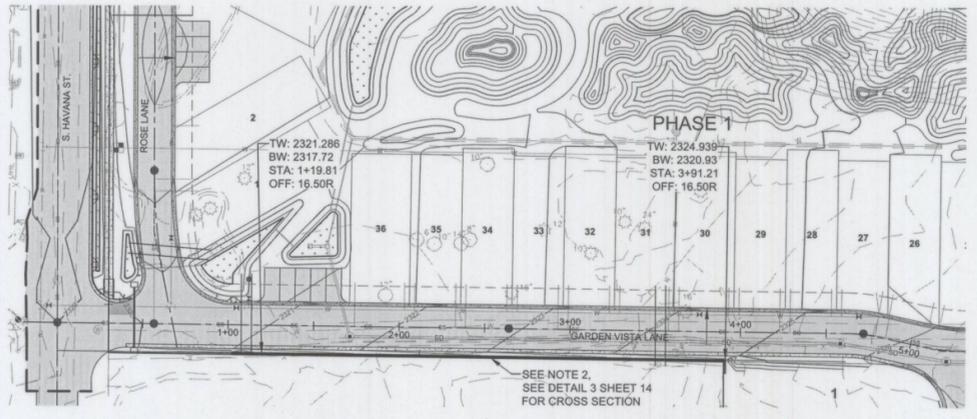
<b>COFFMAN ENGINEERS</b> 10 N. Post Street Suite 500 Spokane, Washington 99201 Tel 509 328 2994 Fax 509 328 2999			
<b>BELLA TERRA PUD PHASE 1</b>			
<b>DETAILS</b>			
DRAWING TITLE			
PROJECT NO. 150401	SCALE AS NOTED	DATE 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO. 15	
DRAWN BY: T.J.W.	REVIEWED BY: T.L.A.		



- NOTES:**
- CONTRACTOR TO COORDINATE WITH OWNER FOR OFF SITE GRADING INSTEAD OF A RETAINING WALL.
  - RETAINING WALL DESIGN(S) BY OTHERS (INCLUDING FOUNDATION DRAINAGE SYSTEM). DESIGN SHALL BE PROVIDED BY A STATE OF WASHINGTON LICENSED ENGINEER RETAINED BY THE CONTRACTOR. RETAINING WALL CONSTRUCTION AND SPECIFICATIONS SHALL CONFORM WITH MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS. ALL STRUCTURAL AND LIFE SAFETY ISSUES SHALL BE ADDRESSED BY THE DESIGNER OF THE RETAINING WALL. PLANS AND SPECIFICATIONS PREPARED AND STAMPED BY A LICENSED ENGINEER IN THE STATE OF WASHINGTON ARE REQUIRED TO BE SUBMITTED TO SPOKANE COUNTY FOR REVIEW AND ACCEPTANCE. THE DESIGNER SHALL REVIEW THE PROVIDED GEOTECHNICAL REPORT FOR SOILS INFORMATION. THE DESIGNER SHALL ALSO REVIEW AND ADHERE TO APPLICABLE CODES AND REQUIREMENTS. IF FABRIC/GEOGRID IS REQUIRED FOR WALL TIE-BACK, IT SHALL NOT BE LOCATED WITHIN 4' HORIZONTALLY OF PROPOSED UTILITIES. COORDINATE WITH THE OWNER FOR ADDITIONAL INFORMATION.

BELLA TERRA LANE NORTH RETAINING WALL

SCALE: 1" = 50'



GARDEN VISTA LANE SOUTH RETAINING WALL

SCALE: 1" = 50'

**UTILITY STATEMENT**  
 LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

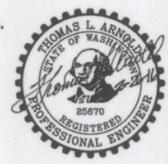
THE EXISTING INFORMATION SHOWN ON THESE PLANS WITHIN PHASE 1 IS PER THE SURVEY COMPLETED BY COFFMAN ENGINEERS DATED AUGUST 14, 2015 AND NOVEMBER 11, 2015. ALL OTHER EXISTING INFORMATION COMPLETED AT AN EARLIER TIME BY OTHERS.  
 THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. THE SPOKANE COUNTY ENGINEER HAS APPROVED ALL DESIGN DEVIATIONS. I APPROVE THESE PLANS FOR CONSTRUCTION.

DEVELOPER'S APPROVAL  
 [Signature] 2-25-16  
 DATE

**811**  
 Know what's below.  
 Call before you dig.

**TBM INFORMATION**  
 1. SET SPIKE IN THE SIDEWALK OF THE SOUTHWEST CORNER OF 24TH AVENUE AND HAVANA EL-2319.83



SPOKANE COUNTY ENGINEERS OFFICE  
 OFFICIAL PUBLIC DOCUMENT ORIGINAL  
**CONSTRUCTION PLANS**  
 PROJECT #: 2-25-16  
 DATE ACCEPTED: 03-25-16  
 ACCEPTANCE EXPIRES: 03-25-18  
 PROJECT LANE MILES PUBLIC: 0  
 PROJECT LANE MILES PRIVATE: 0  
 CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE. PERMIT REQUIRED! (509) 477-5000 NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

\* Wall on south plat boundary subject to temporary construction easement

**COFFMAN ENGINEERS** 10 N. Post Street Suite 500  
 Spokane, Washington 99201  
 Tel 509 328 2994 Fax 509 328 2999

**BELLA TERRA PUD PHASE 1**

DRAWING TITLE: **RETAINING WALL PROFILES**

PROJECT NO. 150401	SCALE: AS NOTED	DATE: 2/8/2016	REVISION NO.
DESIGNED BY: CBM	CHECKED BY: CBM	DRAWING NO. 16	
DRAWN BY: TJW	REVIEWED BY: TLA		