File No. EA2020-119

CITY OF RICHLAND
Determination of Non-Significance

Description of Proposal: Construction of two (2) 12-unit apartment buildings with related parking and infrastructure.

Proponent: Vertisee Apartments
Attn: Lionell Singleton
P.O. Box 3392
Pasco, WA 99302

Location of Proposal: The project site is located at 1156 Columbia Park Trail, Richland, WA 99352.

Lead Agency: City of Richland

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

( ) There is no comment for the DNS.

(**X**) This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for fourteen days from the date of issuance.

( ) This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

Responsible Official: Mike Stevens
Position/Title: Planning Manager
Address: 625 Swift Blvd., MS #35, Richland, WA 99352
Date: September 1, 2020
Signature_____

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:
   Vertisee Apartments
2. Name of applicant:
   Lionell Singleton
3. Address and phone number of applicant and contact person:
   PO Box 3392, Pasco WA 99302

4. Date checklist prepared:
08-04-2020

5. Agency requesting checklist:
City of Richland, WA

6. Proposed timing or schedule (including phasing, if applicable):
First building to begin construction immediately, the second within a year.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

None known

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known

10. List any government approvals or permits that will be needed for your proposal, if known.

None known

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Proposal includes plans for the construction of two 12-unit apartment buildings.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. Parcels 1-3099-200-0009-000 and 1-3099-200-0010-000, 1156 Columbia Park Trail, Richland, WA, Benton County, S30 T09N R29E

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): Flat, (rolling), hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

15 percent

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Per geotechnical report, silty sand and gravel, with 2-10 ft of uncontrolled fill present on site. Per NRCS, not prime farmland, with no intended agricultural use.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. No signs of instability for indigenous soil. Poorly compacted uncontrolled fill will be removed from site.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Site will be graded to remove uncontrolled fill and level site, approximately 55,000 sf affected area and 465 cu yds cut, to be disposed of off site.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes, erosion could occur due to rain on unprotected slopes during construction and due to wind on unstabilized soils.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

75 percent covered by buildings and pavement.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

BMP's such as silt fences and water trucks will be used on site during construction. All disturbed areas will be stabilized upon project completion.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Emissions include dust and exhaust during construction, with minimal emissions after completion associated with residential use.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Apply water during construction to control dust and stabilize soils after construction.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Site is approximately 500 ft from confluence of the Yakima and Columbia Rivers, separated by an adjacent private property and a levee owned by the Corp of Engineers.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Stormwater runoff from apartment roofs and paving areas will drain to catchbasins and be infiltrated below ground via infiltration trenches.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Site will be graded to retain stormwater on site and best management practices in the Stormwater Management Manual for Eastern Washington will be used during construction.

4. Plants [help]

a. Check the types of vegetation found on the site:

__✓__deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
__✓__shrubs
__✓__grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Trees, shrubs, and grasses will be cleared in grading areas during construction.

c. List threatened and endangered species known to be on or near the site.

None known

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Landscaped areas will use native plants to enhance vegetation in open areas on site.

e. List all noxious weeds and invasive species known to be on or near the site.

None known

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site.

None known

c. Is the site part of a migration route? If so, explain.

Yes, the area is part of the Pacific Flyway.

d. Proposed measures to preserve or enhance wildlife, if any:

None

e. List any invasive animal species known to be on or near the site.

None known

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electricity will be used for heating, cooling, lights, and household appliances.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Project will follow energy code requirements.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No

1) Describe any known or possible contamination at the site from present or past uses.

None known

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There is an existing gas transmission line on the opposite side of Columbia Park Trail, but it will not be affected by this project.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

None

4) Describe special emergency services that might be required.

Only typical emergency services such as police, ambulance, and fire will be required.

5) Proposed measures to reduce or control environmental health hazards, if any:

None

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? Street noise from local roads or water traffic noise from nearby river, the project will not be affected.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. Typical construction noises will be present during construction phase of project, with minimal noise after completion associated with residential use.

3) Proposed measures to reduce or control noise impacts, if any:

None

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Existing lots are empty/unused. Adjacent lots uses are residential and commercial, and will not be affected by this project.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No

c. Describe any structures on the site.

There is an existing, unused residential building on site.

d. Will any structures be demolished? If so, what?

Yes, existing residential building will be demolished.

e. What is the current zoning classification of the site?

WF (Waterfront)

f. What is the current comprehensive plan designation of the site?

Waterfront

g. If applicable, what is the current shoreline master program designation of the site?

N/A

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Site is within floodplain boundary according to the City of Richland.

i. Approximately how many people would reside or work in the completed project?

Approximately 75 people would reside in completed apartments (assuming an average of 3 people per apartment unit).

j. Approximately how many people would the completed project displace?

No people would be displaced.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

None, project is already compatible with intended use.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

None

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

24 housing units, middle to high income

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

One middle-income housing unit, currently not used

c. Proposed measures to reduce or control housing impacts, if any:

None

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

38 ft max height, exterior building materials composed of fiber cement panels with wood trim.

b. What views in the immediate vicinity would be altered or obstructed?

Structures would alter view of existing lot itself for adjacent residential and commercial properties, and partially obscure view of existing levee from Columbia Park Trail.

b. Proposed measures to reduce or control aesthetic impacts, if any:

None

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Some exterior yard and security lighting typical of apartment buildings, occurring mainly at night.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

None

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

None

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

None known

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None known

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

None

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

If any items of historic, cultural, or archaeological significance are uncovered during construction, the work will be stopped and the appropriate authorities will be notified.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Closest public street is Columbia Park Trail. A new driveway will be constructed to provide access to the site.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Yes, a local bus stop is located within 100 ft of proposed driveway.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

36 new parking spaces will be provided, and none eliminated.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Per ITE Code 220, an average of 209 trips per day will be generated.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No

h. Proposed measures to reduce or control transportation impacts, if any:

None

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

Yes, proposed project will increase needs associated with residential use, including fire, police, emergency, healthcare, and school services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

c. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Proposed utilities include water and sewer (City of Richland), electricity (Richland Energy Services), cable (Spectrum), and telephone (Ziply). Some utilities will need to be extended to site from Columbia Park Trail.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Lionell Singleton

Name of signee Lionell Singleton

Position and Agency/Organization Managing Partner World Builder LLC

Date Submitted: 8-17-20

D. Supplemental sheet for nonproject actions [HELP]

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks,

wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

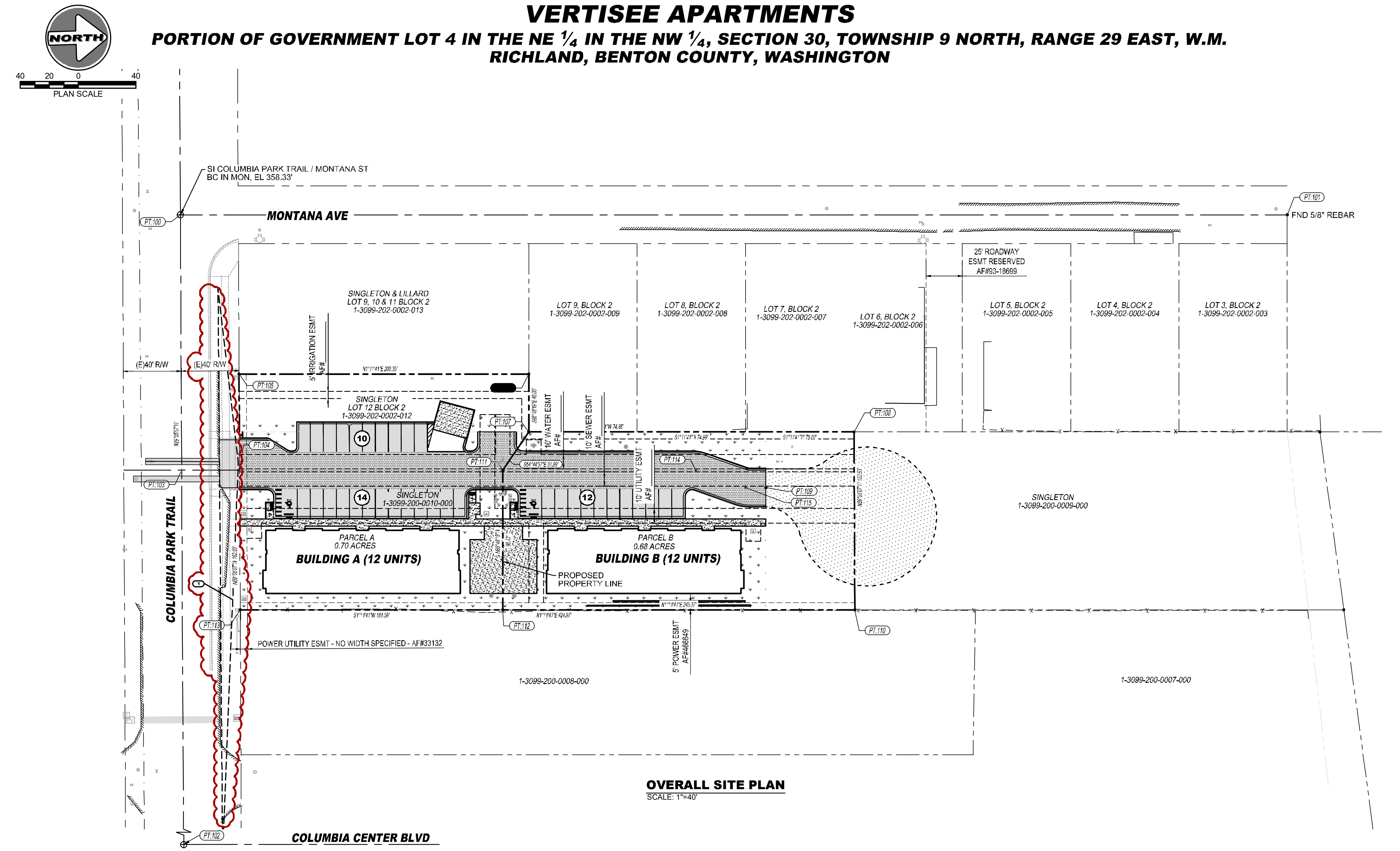
Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

VERTISEE APARTMENTS

PORTION OF GOVERNMENT LOT 4 IN THE NE 1/4 IN THE NW 1/4, SECTION 30, TOWNSHIP 9 NORTH, RANGE 29 EAST, W.M.

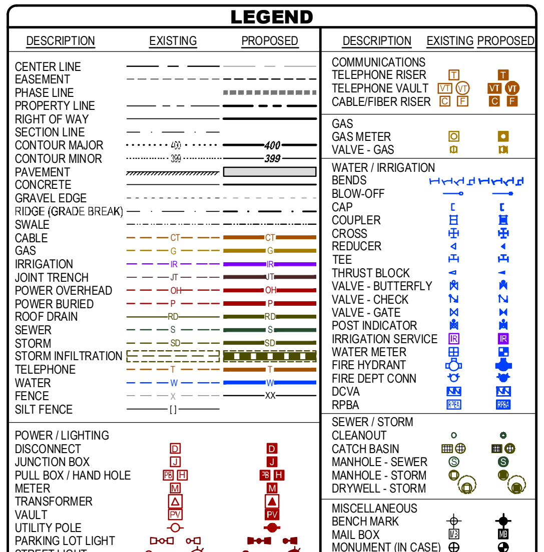
RICHLAND, BENTON COUNTY, WASHINGTON



OVERALL SITE PLAN

SCALE: 1"=40'

LEGEND



ABBREVIATIONS

AP	ANGLE POINT	N	NORTH
BM	BENCHMARK	OC	ON CENTER
CL	CENTERLINE	PL	PROPERTY LINE
C	CURVE	P / PWR	POWER
CB	CATCH BASIN	PC	POINT OF CURVATURE INTERSECT
CF	CUBIC FEET	PED	PEDESTRIAN
CO	CLEANOUT	PNT / PT#	POINT(S) / POINT NUMBER
CONC	CONCRETE	PT	POINT OF TANGENCY
CONN	CONNECTION	QP	QUARTER POINT
CONT	CONTINUOUS	R	RADIUS / RIGHT
CSBC	CRUSHED SURFACE BASE COURSE	REQD	REQUIRED
CSTC	CRUSHED SURFACE TOP COURSE	RES	RICHLAND ENERGY SERVICES
CY	CUBIC YARD	RP	RADIUS POINT
DCVA	DOUBLE CHECK VALVE ASSEMBLY	RPBA	REDUCED PRESSURE BACKFLOW ASSEMBLY
DI	DUCTILE IRON		
DTL	DETAIL	R / W	RIGHT OF WAY
DWG	DRAWING	S	SEWER / SLOPE / SOUTH
(E) / EXST	EXISTING	SD	STORM DRAIN
E	EAST	SDMH	STORM DRAIN MANHOLE
EG	EXISTING GRADE	SF	SQUARE FEET
EL	ELEVATION	SHT	SHEET
ESMT	EASEMENT	SI	STATION / STREET INTERSECTION
FF	FINISHED FLOOR	SL	STREET LIGHT
FG	FINISHED GRADE	SPEC	SPECIFICATION
FH	FIRE HYDRANT	SS	SANITARY SEWER
FL	FLOW LINE / FLANGE(D)	SSMH	SANITARY SEWER MANHOLE
FND	FOUND (SURVEY RELATED)	STA	STATION
FT	FEET	STD	STANDARD
GB	GRADE BREAK	S / W	SIDEWALK
H / HORZ	HORIZONTAL	TA	TOP OF ASPHALT
HMA	HOT MIXED ASPHALT	TBC	TOP BACK OF CURB
HP	HIGH POINT	TBM	TEMPORARY BENCHMARK
IE / INV	INVERT ELEVATION	TC	TOP OF CONCRETE
IR	IRRIGATION	TG	TOP OF GRAVEL
L	LEFT / LENGTH	TEL	TELEPHONE
LF	LINEAL FEET	TYP	TYPICAL
MAX	MAXIMUM	TV	TELEVISION / CABLE
MH	MANHOLE	UTIL	UTILITY
MIN	MINIMUM	V / VERT	VERTICAL
MJ	MECHANICAL JOINT	W	WEST
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	W / WTR	WATER
(N)	NEW	WM	WATER METER

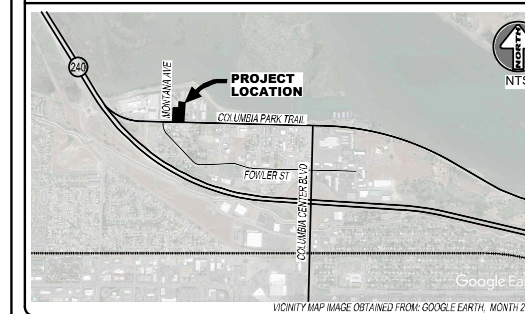
PROJECT CONTROL POINTS

PT #	DESCRIPTION	NORTHING	EASTING
100	SI COLUMBIA PARK TRAIL / MONTANA ST. PROJECT BENCHMARK, ELEV 358.33'	332,518.01	1,959,958.19
101	FND REBAR EL 351.83'	333,283.04	1,959,974.15
102	SI COLUMBIA CENTER BLVD / COLUMBIA PARK TRAIL	332,461.95	1,963,467.52
103	COLUMBIA PARK TRAIL CL, DRIVEWAY CL	332,515.17	1,960,134.68
104	PROP LINE, DRIVEWAY CL	332,555.16	1,960,135.51
105	PROP CORNER	332,556.22	1,960,069.02
107	PROP CORNER	332,755.64	1,960,113.19
108	PROP CORNER	332,980.45	1,960,117.88
109	PROP CORNER, DRIVEWAY CL	332,918.80	1,960,155.10
110	PROP CORNER	332,978.49	1,960,240.79
111	PROP CORNER	332,737.18	1,960,139.31
112	PROP CORNER	332,735.17	1,960,235.72
113	PROP CORNER	332,553.62	1,960,231.93
114	PROP CORNER	332,870.62	1,960,142.09
115	PROP CORNER	332,904.83	1,960,154.81

KEY NOTES

(1) INSTALL GRAVEL TEMPORARY TURNAROUND PER COR STD DWG ST19.

VICINITY MAP



VICINITY MAP IMAGE OBTAINED FROM: GOOGLE EARTH, MONTH 201X

SURVEYOR

CHRIS AMMANN, PLS.
509-375-4123
2245 ROBERTSON DRIVE
RICHLAND, WA 99354

DATUM - BENCHMARK

HORIZONTAL DATUM: NAD83, WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
VERTICAL DATUM: NAVD88
BENCHMARK: BC MON, COLUMBIA PARK TRAIL & MONTANA AVE, EL 358.33',

REFERENCE MATERIALS

1. TOPOGRAPHICAL SURVEY, PROJECT #18014, DATED 09-26-2018 PERMIT SURVEYING, INC, RICHLAND, WA.
2. CITY OF RICHLAND GIS MAP, CAD FILE - CPT DEVELOPMENT.DWG RECEIVED 07-13-2018, CITY OF RICHLAND.
3. BOUNDARY LINE ADJUSTMENT, DATED 06-08-18 PERMIT SURVEYING, INC, RICHLAND, WA.
4. SITE PLAN BY ANKROM MOISAN ARCHITECTS INC, RECEIVED 01-14-2020.
5. GEOTECHNICAL SITE INVESTIGATION REPORT, PREPARED BY GN NORTHERN, INC. DATED 06-05-2018.

SITE INFORMATION

(E) PERVIOUS AREA:	46,690 SF
(E) IMPERVIOUS AREA:	1,310SF
(N) PERVIOUS AREA:	27,728 SF
(N) IMPERVIOUS AREA:	13,217 SF
TOTAL SITE AREA:	48,000 SF

CUT - FILL QUANTITIES

CUT:	1246	CY
FILL (1.20):	809	CY
NET (CUT):	437	CY

NOTE: CUT/FILL QUANTITIES ARE APPROXIMATE AND CALCULATED TO TOP OF FINISHED GRADE AND DO NOT ACCOUNT FOR ANY OVEREXCAVATION OF UNCLASSIFIED FILL. REFER TO GEOTECH NOTES ON SHEET C4.

IDENTIFIERS

DETAILS AND SECTIONS

A = DETAIL NUMBER
B = SHEET REFERENCE

WATER AND IRRIGATION FITTINGS

A = SHEET REFERENCE
B = FITTING NUMBER

DRAWING INDEX

- **C1** COVER SHEET / OVERALL SITE PLAN
- **C2** SITE LAYOUT PLAN AND DETAILS
- **C3** UTILITY PLAN AND WATER & SEWER PROFILE
- **C4** SITE GRADING AND EROSION CONTROL PLAN
- **C5** NOTES AND DETAILS

UTILITY CONTACT INFORMATION

POWER: CITY OF RICHLAND ENERGY SERVICES, JOE BIRCHER 509-942-7415
PO BOX 190, 840 NORTHGATE DR, RICHLAND, WA 99352

FIBER OPTIC: NOANET, DAN WICKERSHAM, 509-456-3619

CABLE: SPECTRUM COMMUNICATIONS, JUNIOR CAMPOS 509-222-2577
639 N KELLOGG ST, KENNEWICK, WA 99336

GAS: CASCADE NATURAL GAS, SARA PINEDA 509-405-6377
200 N UNION ST, KENNEWICK, WA 99336

IRRIGATION: COLUMBIA IRRIGATION DISTRICT, LILA FRESHMENT 509-586-6118
10 E KENNEWICK AVENUE, KENNEWICK, WA 99336

TELEPHONE: FRONTIER COMMUNICATIONS, JOE CICHY 509-736-3722
4916 W CLEARWATER AVE, KENNEWICK, WA 99336

SEWER / WATER: CITY OF RICHLAND PUBLIC WORKS, JUDY GARCIA 509-545-3444
PO BOX 190, 840 NORTHGATE DR, RICHLAND, WA 99352

CITY ENGINEER APPROVAL

SIGNATURE **DATE**

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1632 W Sylvester Street, Pasco WA 99301 | 509.547.2679 | HarmsEngineering.com
Designed By: C BATAYOLA
Drawn By: J FROELICH
File Name: 18-050 Site 14
Plotted: Sep 1, 2020, 8:59:23 AM
File Path: P:\2018\18-050.1&2 World Builder Lionell Singleton Multi-Use Development\Dwgs

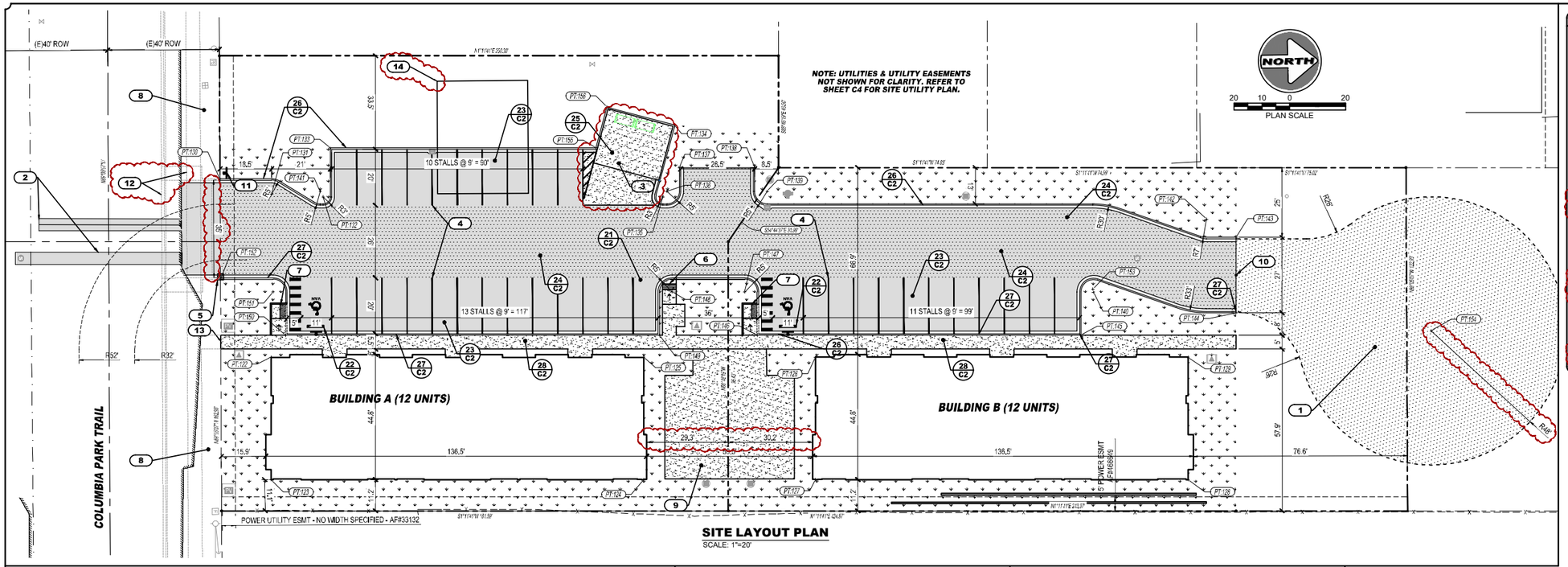
Rev	Description	By	Date
1	REVIEW COMMENT REVISIONS	JCF	09-03-2020

Drawing Name
VERTISEE APARTMENTS
COVER SHEET / OVERALL PLAN
PARCELS 1-3099-200-0009-000 AND 1-3099-200-0010-000, COLUMBIA PARK TRAIL, RICHLAND, WA

Client/Project Information
WORLD BUILDER, LLC
LIONEL SINGLETON
PO BOX 3392, PASCO, WA 99302

CHRISTINE ENGAN, STATE OF WASHINGTON, 42529, REGISTERED PROFESSIONAL ENGINEER, 3/11/2020

Date: 03-11-2020
Project Number: 18-050.2
Sheet Number: C1



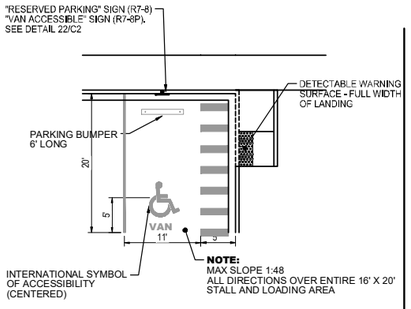
SITE LAYOUT PLAN
SCALE: 1"=20'

KEY NOTES

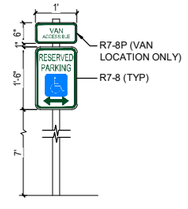
1. INSTALL GRAVEL TEMPORARY TURNAROUND PER COR STD DWG ST19.
2. SAW CUT SECTION AND TRENCH REPAIR PER COR STD DWG U2: EXISTING ASPHALT COVERS 8" CONCRETE
3. INSTALL TRASH ENCLOSURE PER COR STD DWG SW2B AND SW-03.
4. PAINT 4" WIDE WHITE STRIPING FOR PARKING STALLS, 2 COATS, TYP.
5. REMOVE EXISTING MAILBOX
6. INSTALL SIDEWALK RAMP TYPE 3A PER CITY OF RICHLAND STD DWG ST6, MAX 7.5% LONG. GRADE.
7. INSTALL PARALLEL SIDEWALK RAMP TYPE 2A (MODIFIED) PER CITY OF RICHLAND STD DWG ST5, MAX 7.5% LONG. GRADE.
8. LANDSCAPE AREA BETWEEN EXISTING EDGE OF PAVEMENT AND PROPERTY LINE. DESIGN BY OTHERS. LANDSCAPE SHALL ADHERE TO SIGHT DISTANCE SETBACK AS SHOWN ON C1.
9. FUTURE PATIO/COMMUNAL AREA, REFER TO ARCHITECTURAL PLAN.
10. END PAVING
11. INSTALL STOP SIGN (R1-1) PER COR STANDARDS.
12. IMPROVEMENTS ALONG FRONTAGE OF COLUMBIA PARK TRAIL, INCLUDING CURB, GUTTER AND SIDEWALK TO BE INCLUDED WITH CITY OF RICHLAND PROJECT #20-0029
13. SIDEWALK TO CONNECT TO NEW SIDEWALK ALONG COLUMBIA PARK TRAIL. BOTH SIDEWALKS MUST MAINTAIN 1.5% CROSS SLOPE (2.0% MAX) AND 4.5% LONGITUDINAL SLOPE (5.0% MAX).
14. EXISTING HOUSE TO BE DEMOLISHED PRIOR TO BEGINNING CONSTRUCTION.

PROJECT CONTROL POINTS

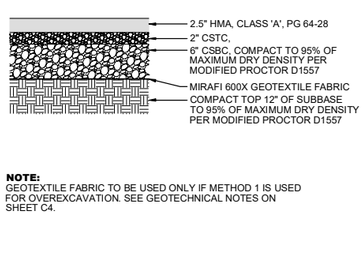
PT #	DESCRIPTION	NORTHING	EASTING
122	BLDG CORNER	332,572.49	1,960,177.29
123	BLDG CORNER	332,571.58	1,960,221.07
124	BLDG CORNER	332,705.09	1,960,223.86
125	BLDG CORNER	332,706.00	1,960,180.08
126	BLDG CORNER	332,767.49	1,960,181.36
127	BLDG CORNER	332,766.58	1,960,225.14
128	BLDG CORNER	332,900.09	1,960,227.93
129	BLDG CORNER	332,901.00	1,960,184.14
130	TBC END	332,555.52	1,960,113.01
131	CENTER R5'	332,573.91	1,960,118.90
132	CENTER R5'	332,592.38	1,960,120.28
133	TBC AP	332,595.24	1,960,102.84
134	GARBAGE CORNER	332,718.87	1,960,097.25
135	CENTER R25'	332,714.05	1,960,122.82
136	CENTER R5'	332,715.48	1,960,120.85
137	TBC END	332,720.15	1,960,112.45
138	TBC END	332,747.15	1,960,113.01
139	CENTER R5'	332,751.47	1,960,121.60
140	CENTER R5'	332,867.60	1,960,160.17
141	CENTER R5'	332,591.34	1,960,118.26
142	CENTER R7' / R32'	332,908.63	1,960,134.88
143	TBC END	332,919.08	1,960,141.60
144	TBC END	332,918.52	1,960,168.60
145	TBC AP	332,882.78	1,960,175.43
146	TBC AP	332,746.81	1,960,173.02
147	CENTER R5'	332,742.83	1,960,157.43
148	CENTER R5'	332,716.64	1,960,156.88
149	TBC AP	332,711.82	1,960,172.29
150	TBC AP	332,577.85	1,960,169.49
151	CENTER R5'	332,573.67	1,960,153.90
152	TBC AP	332,564.04	1,960,149.01
153	CENTER R30'	332,867.39	1,960,159.03
154	CENTER R40'	332,988.33	1,960,176.52
155	TBC AP	332,690.47	1,960,104.83
156	GARBAGE CORNER	332,694.71	1,960,090.23



21/C2 ADA VAN PARKING STALL
SCALE: NONE

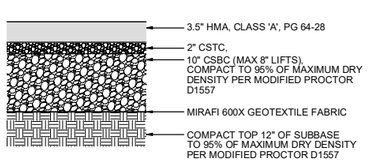


22/C2 RESERVED PARKING SIGN
SCALE: NONE



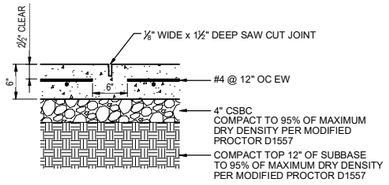
NOTE:
GEOTEXTILE FABRIC TO BE USED ONLY IF METHOD 1 IS USED FOR OVEREXCAVATION. SEE GEOTECHNICAL NOTES ON SHEET C4.

23/C2 STANDARD PAVING SECTION
SCALE: NONE



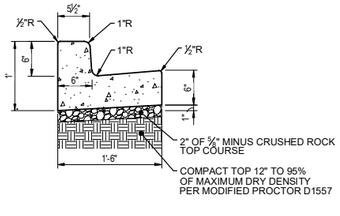
NOTE:
GEOTEXTILE FABRIC TO BE USED ONLY IF METHOD 1 IS USED FOR OVEREXCAVATION. SEE GEOTECHNICAL NOTES ON SHEET C4.

24/C2 HEAVY PAVING SECTION
SCALE: NONE

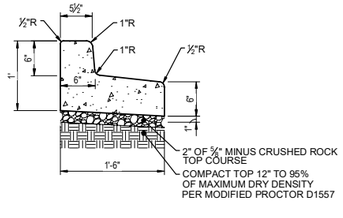


NOTE:
SAW CUT JOINTS AT 12' MAXIMUM SPACING.
DISCONTINUE REINFORCING AT JOINTS.

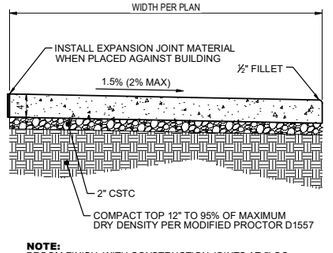
25/C2 6" CONCRETE SECTION
SCALE: NONE



26/C2 CURB AND GUTTER
SCALE: NONE



27/28 SHED CURB AND GUTTER
SCALE: NONE



NOTE:
BROOM FINISH, WITH CONSTRUCTION JOINTS AT 5' OC AND ⅜" FULL DEPTH EXPANSION JOINTS AT 15' OC.

28/C2 STANDARD SIDEWALK SECTION
SCALE: NONE

CITY ENGINEER APPROVAL

SIGNATURE _____ DATE _____

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1632 W Sylvester Street, Pasco, WA 99301 | 509.547.2679 | HarmsEngineering.com

Designed By: C WATKOCA
File Name: 18-050 Site 14
File Path: P:\2018\18-050.14\2 Wood Bunker Lionel Singleton Multi-Use Development\Dwgs
Drawn By: J FROELICH
Plotted: Sep 1, 2020, 8:55:33 AM

Rev	Description	By	Date
1	REVIEW COMMENT REVISIONS	JCF	08-03-2020

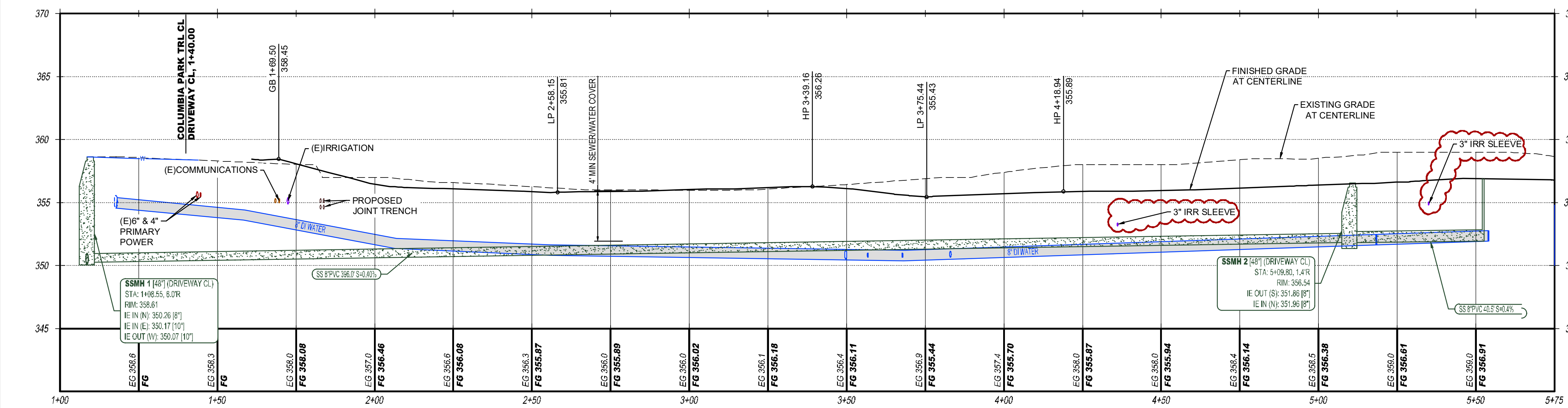
VERTISEE APARTMENTS
SITE LAYOUT PLAN AND DETAILS
PARCELS 1-3099-200-0009-000 AND 1-3099-200-0010-000, COLUMBIA PARK TRAIL, RICHLAND, WA

Drawing Name

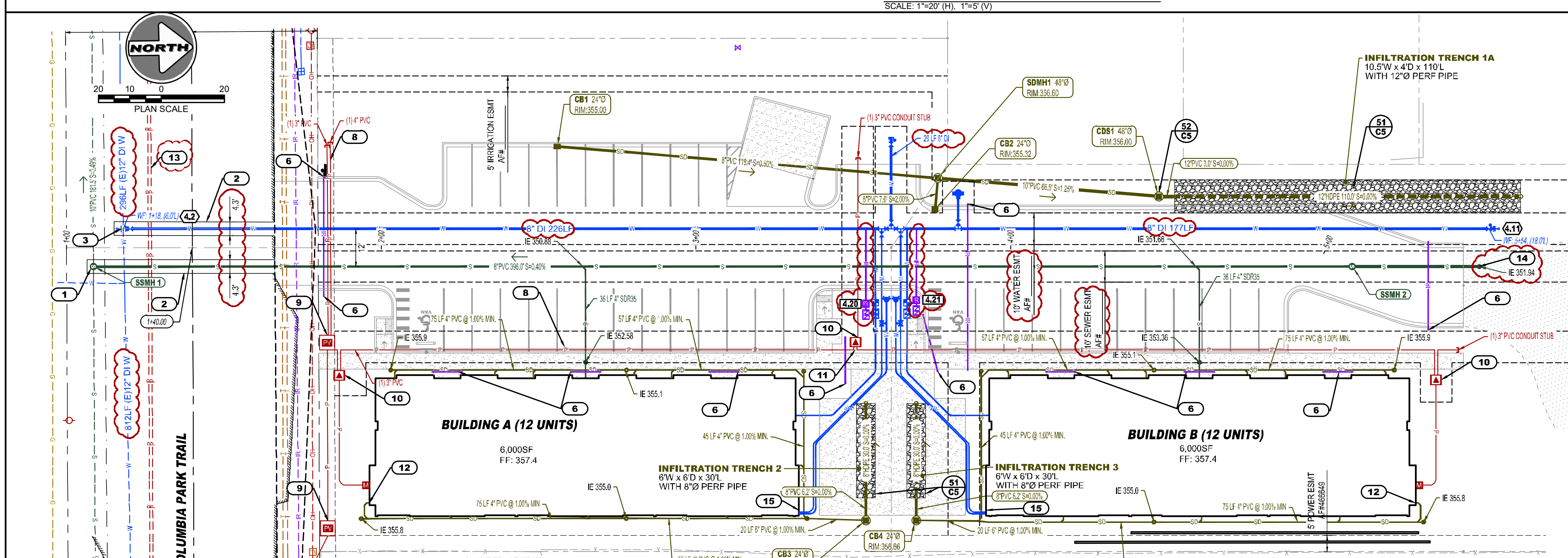
Client/Project Information
WORLD BUILDER, LLC
LIONEL SINGLETON
PO BOX 3392, PASCO, WA 99302

CHRISTINE ENGAN — STATE OF WASHINGTON — 42529 — REGISTERED PROFESSIONAL ENGINEER

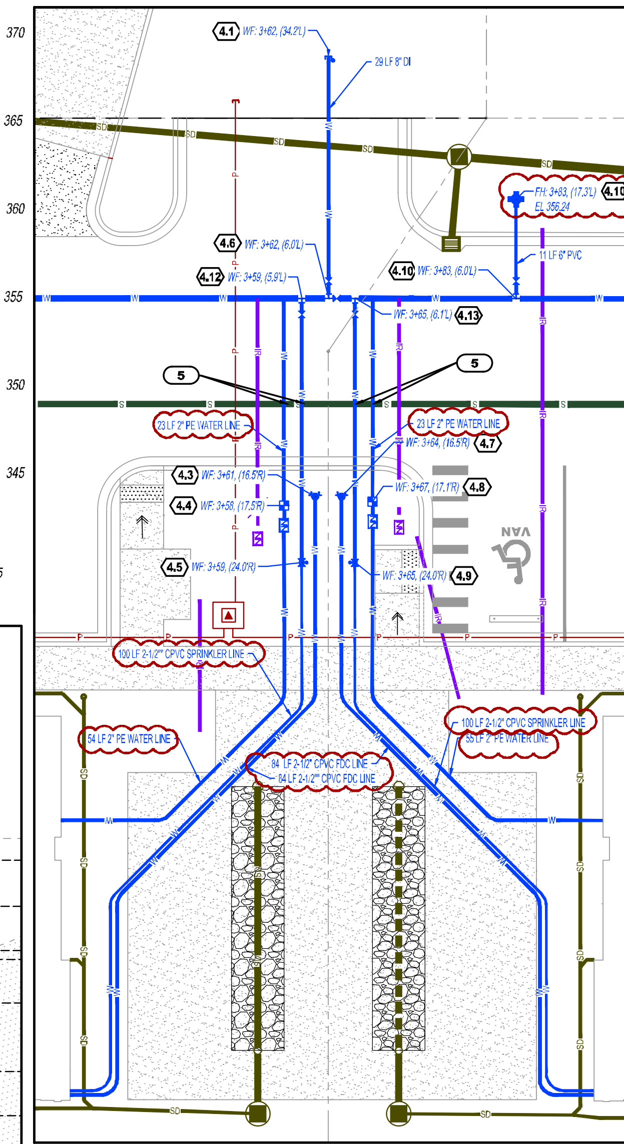
Date: 03-11-2020
Project Number: 18-050.2
Sheet Number: C2



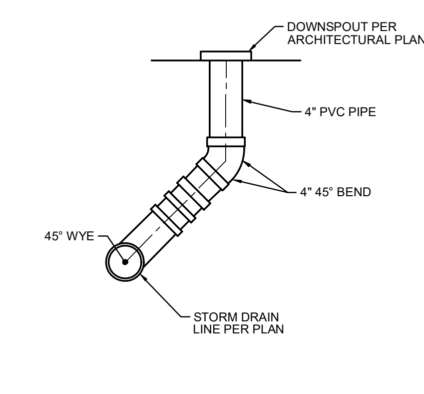
DRIVEWAY WATER & SEWER PROFILE
SCALE: 1"=20' (H), 1"=5' (V)



SITE UTILITY PLAN
SCALE: 1"=20'



31/C3 SITE UTILITY PLAN INSET
SCALE: 1" = 10'



31/C3 ROOF DOWNSPOUT LEADER DETAIL
SCALE: NONE

KEY NOTES

1. INSTALL 48" MANHOLE ON EXISTING 10" SEWER MAIN PER COR STD DWG S3.
2. SAWCUT AND TRENCH REPAIR PER COR STD DWG U2. COORDINATE WITH COR. EXISTING ASPHALT COVERS 8" CONCRETE ROAD.
3. CONTRACTOR TO SUPPLY CUT-IN TEE MATERIALS AND HAVE LOCATION EXCAVATED WITH MIN 2' CLEARANCE AROUND ALL NEW FITTINGS. CITY CREWS TO INSTALL CUT-IN TEE AT DEVELOPER'S EXPENSE, AND CONTRACTOR TO INSTALL THRUST BLOCK AND VALVE BOX PER COR STD DWG W10.
4. BORE UNDER ROADWAY FOR NEW POWER SERVICE.
5. MAINTAIN 18" CLEARANCE BETWEEN WATER AND SEWER AT CROSSINGS, TYP. WATER TO CROSS OVER SEWER. WHERE WATER LINE DOES NOT PASS OVER SEWER LINE WITH 18" CLEARANCE, BACKFILL WITH CDS AT CROSSINGS.
6. INSTALL 3" IRRIGATION SLEEVE TO ALL LANDSCAPED AREAS, EXTEND 6" PAST CONCRETE TYP.
7. COORDINATE WITH RICHLAND ENERGY SERVICES ON EXTENSION OF SERVICE TO SITE.
8. PROVIDE TRENCH AND CONDUITS FOR POWER, CABLE, GAS, PHONE, AND FIBER IN JOINT TRENCH. COORDINATE WITH RICHLAND ENERGY SERVICES.
9. NEW V11 VAULT. COORDINATE WITH RES FOR INSTALLATION.
10. NEW V3 VAULT. COORDINATE WITH RES FOR INSTALLATION.
11. SAW CUT SECTION AND TRENCH REPAIR PER COR STD DWG U2. EXISTING ASPHALT COVERS 8" CONCRETE
12. CONNECT 4" DOWNSPOUT TO STORM DRAIN LINE WITH WYE FITTINGS, TYP 11 LOCATIONS EA BUILDING. SEE DETAIL 31/C3

KEY NOTES

13. LOCATE BURIED POWER CONDUIT PRIOR TO BEGINNING WORK.
14. INSTALL 8" SEWER CLEANOUT PER COR STD DWG S-09.
15. FIRE SPRINKLER DOUBLE CHECK VALVE ASSEMBLY TO BE INSTALLED IN RISER ROOM.

IRRIGATION FITTINGS

4.20
1 - 1" WATER METER PER COR STD DWG W3
1 - 1" DCVA PER COR STD DWG W19

4.21
1 - 1" WATER METER PER COR STD DWG W3
1 - 1" DCVA PER COR STD DWG W19

WATER FITTINGS

NOTE: FIRE SPRINKLER DESIGNER TO VERIFY SPRINKLER SIZES

4.1
1 - 2" BLOW OFF PER COR STD DWG W13A
1 - 8" CAP
1 - THRUST BLOCK PER COR STD DWG W16

4.2
1 - 12"x12"x8" CUT-IN TEE PER COR STD DWG W10
1 - 8" GATE VALVE
1 - THRUST BLOCK PER COR STD DWG W16

4.3
1 - 4" FIRE DEPARTMENT CONNECTION
1 - 4" X 2-1/2" REDUCER

4.4
1 - 2" WATER METER PER COR STD DWG W5
1 - 2" DCVA PER COR STD DWG W19

4.5
1 - 4" POST INDICATING VALVE W/TAMPER SWITCH
1 - 4" X 2-1/2" COMPANION FLANGE

4.6
1 - 8"x8"x8" TEE PER COR STD DWG W10
2 - 8" GATE VALVE
1 - THRUST BLOCK PER COR STD DWG W16

4.7
1 - 4" FIRE DEPARTMENT CONNECTION
1 - 4" X 2-1/2" REDUCER

4.8
1 - 2" WATER METER PER COR STD DWG W5
1 - 2" DCVA PER COR STD DWG W19

4.9
1 - 4" POST INDICATING VALVE W/TAMPER SWITCH
1 - 4" X 2-1/2" COMPANION FLANGE

4.10
1 - 8"x8"x6" TEE
1 - 6" GATE VALVE
1 - FIRE HYDRANT ASSEMBLY PER COR STD DWG W14
2 - THRUST BLOCK PER COR STD DWG W16

4.11
1 - 2" BLOW OFF PER COR STD DWG W13A
1 - 8" GATE VALVE
1 - THRUST BLOCK PER COR STD DWG W16

4.12
1 - 8"x8"x4" TEE PER COR STD DWG W10
1 - 4" GATE VALVE
1 - THRUST BLOCK PER COR STD DWG W16

4.13
1 - 8"x8"x4" TEE PER COR STD DWG W10
1 - 4" GATE VALVE
1 - THRUST BLOCK PER COR STD DWG W16

STORM STRUCTURE TABLE

STRUCTURE ID / SIZE	ALIGNMENT & STATION	RIM EL	PIPES IN/OUT	SUMP
CB1 [24"Ø]	DRIVEWAY CL 2+55.91, 32.2' L	355.00	IE OUT (N): 352.83 [8"], P1	1.50'
CB2 [24"Ø]	DRIVEWAY CL 3+76.00, 12.2' L	355.32	IE OUT (W): 353.50 [8"], P12	1.50'
CB3 [24"Ø]	DRIVEWAY CL 3+54.06, 86.6' R	356.66	IE OUT (W): 353.90 [8"], P2	1.50'
CB4 [24"Ø]	DRIVEWAY CL 3+70.06, 86.6' R	356.66	IE OUT (W): 353.90 [8"], P4	1.50'
CDS1 [48"Ø]	DRIVEWAY CL 4+47.16, 16.2' L	356.00	IE IN (S): 351.85 [10"], P11 IE OUT (N): 351.65 [12"], P6	1.50'
SDMH1 [48"Ø]	DRIVEWAY CL 3+76.91, 22.1' L	356.60	IE IN (S): 352.22 [8"], P1 IE IN (E): 353.30 [8"], P12 IE OUT (N): 352.73 [10"], P11	0.00'

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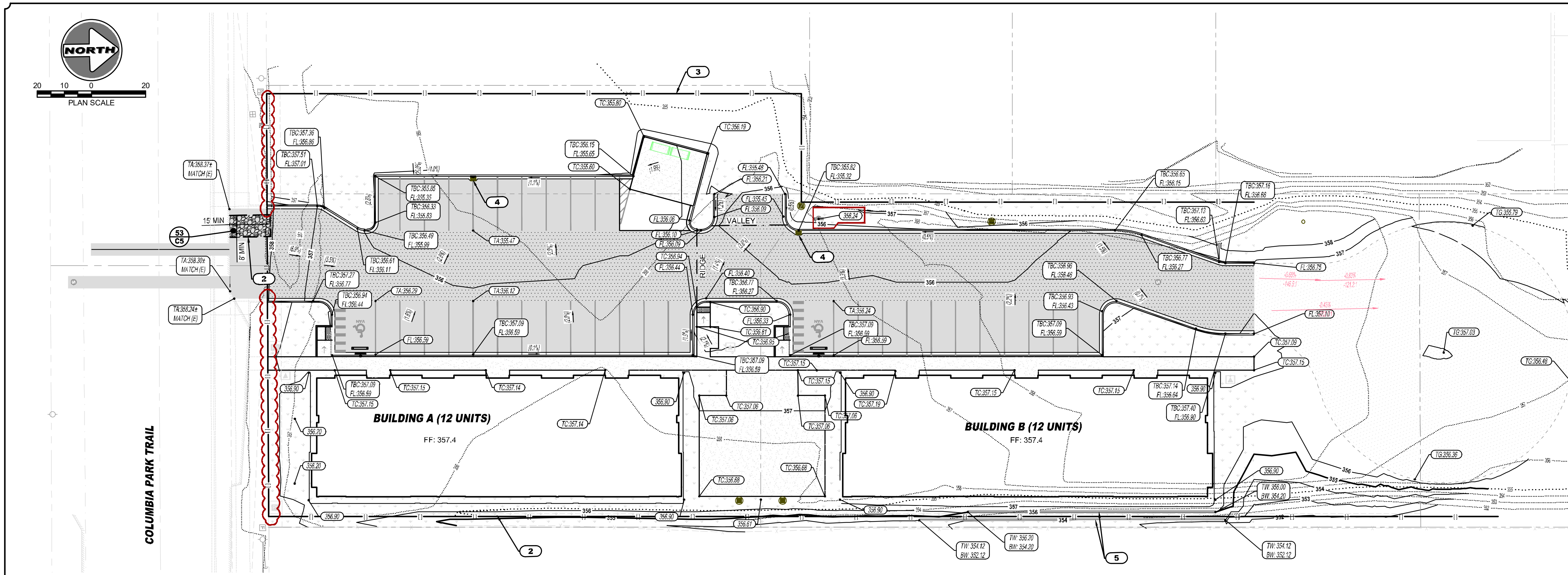
Date: **03-11-2020**
Project Number: **18-050.2**
Sheet Number: **C3**



SITE GRADING PLAN & EROSION CONTROL PLAN

SCALE: 1"=20'

GEOTECHNICAL NOTES

1. GEOTECHNICAL ENGINEER TO MONITOR OVER-EXCAVATION AND SUBGRADE PREP.
2. A GEOTECHNICAL REPORT WAS PREPARED FOR THIS SITE BY GN NORTHERN, INC., PROJECT NO. 218-940, DATED JUNE 2018. REFER TO THE REPORT FOR THE FULL INVESTIGATION AND RECOMMENDATIONS.
3. THE SITE HAS VARYING LEVELS OF UNDOCUMENTED/UNCONTROLLED FILL ACROSS THE SITE, FROM APPROXIMATELY 2-3 FT DEEP IN THE SOUTH THIRD OF THE SITE AND 6-10 FT DEEP IN THE NORTHERN TWO THIRDS OF THE SITE. FILL MATERIAL CLASSIFIED AS SILTY SANDY GRAVELS WITH VARYING AMOUNTS OF COBBLES AND BOULDERS AND SOME MISCELLANEOUS ASPHALT, CONCRETE, BRICK, AND METAL DEBRIS.
4. NATIVE SOILS PRIMARILY CONSIST OF SILTY SAND GRADING TO INCLUDE COBBLES/BOULDERS, BECOMING SILTY SANDY GRAVEL AT DEPTH.
5. GROUNDWATER IS ESTIMATED TO BE APPROXIMATELY 10 FEET BELOW GROUND SURFACE.
6. SUBGRADE PREP:
   - 6.1. REMOVE EXISTING TOPSOIL AND ORGANICS. TOPSOIL MAY BE STOCKPILED FOR USE IN LANSCAPED AREAS.
   - 6.2. OVEREXCAVATION:
     - 6.2.1. IN BUILDING FOOTPRINT AREAS AND DRIVEWAY PAVEMENT AREAS: OVER-EXCAVATE SOIL TO COMPLETELY REMOVE ALL UNCONTROLLED FILL, INCLUDING A MINIMUM 5-FOOT LATERAL OFFSET. OVER-EX SHALL EXPOSE NATIVE UNDERLYING SILTY SAND SOILS..
     - 6.2.2. IN PARKING LOT AREAS:
       - **6.2.2.1.** **METHOD 1:** OVER-EXCAVATE SOIL TO REMOVE A MINIMUM OF 18" OF ARTIFICIAL SOIL AND INSTALL MIRAFI 600X GEOTEXTILE FABRIC AT THE BOTTOM OF THE OVER-EX (SEE GEOTECHNICAL REPORT FOR ASSUMED RISKS FOR METHOD 1).
       - **6.2.2.2.** **METHOD 2:** OVER-EXCAVATE SOIL TO COMPLETELY REMOVE ALL UNCONTROLLED FILL, INCLUDING A MINIMUM 5-FOOT LATERAL OFFSET. OVER-EX SHALL EXPOSE NATIVE UNDERLYING SILTY SAND AND SOILS.
   - 6.3. BACKFILL OVER-EX WITH ENGINEERED STRUCTURAL FILL CONSISTING OF SUITABLE/SCREENED ONSITE SOIL AND/OR 2-INCH MINUS GRAVEL BORROW MATERIAL.
   - 6.4. BACKFILL OVER-EX WITH ENGINEERED STRUCTURAL FILL CONSISTING OF SUITABLE/SCREENED ONSITE SOIL AND/OR 2-INCH MINUS GRAVEL BORROW MATERIAL.
   - 6.5. PLACE A MINIMUM OF 12" OF IMPORTED 1 $\frac{1}{4}$" MINUS CRUSHED ROCK BENEATH ALL FOUNDATIONS, AND 6 INCHES OF $\frac{3}{4}$" MINUS CRUSHED ROCK BENEATH SLABS ON GRADE.
7. STRUCTURAL FILL
   - 7.1. EXISTING SANDY SOILS MAY BE USED FOR STRUCTURAL FILL OR BACKFILL INCLUDING FOR UTILITY BACKFILLING PROVIDED ALL ORGANICS, DEBRIS, AND ANY OTHER DELETERIOUS MATERIALS HAVE BEEN REMOVED.
   - 7.2. STRUCTURAL FILL AND BACKFILL SHOULD BE PLACED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY PER ASTM D 1557.
   - 7.3. IMPORTED FILL SHOULD BE A 1$\frac{1}{4}$" MINUS PIT RUN SAND AND GRAVEL WITH LESS THAN 5 PERCENT FINES, OR CRUSHED ROCK.
8. COMPACT ALL BASE COURSES BELOW PAVEMENTS TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY PER ASTM D 1557.
9. THE NEAR SURFACE SILTY SAND IS MOISTURE SENSITIVE. REFER TO GEOTECH REPORT FOR RECOMMENDATIONS FOR EARTHWORK INCLUDING DURING WET WEATHER.
10. CONTRACTOR IS REPONSIBLE FOR THE TEMPORARY EXCAVATION SLOPE AND SAFETY OF ALL TEMPORARY EXCAVATIONS BASED ON EXPOSED GROUND CONDITIONS.
11. REMOVE ALL ORGANIC MATERIAL AND ROCKS/CONCRETE DEBRIS FROM MATERIAL USED AS FILL AND DISPOSE OF OFF-SITE.
12. MATERIAL PLACED AS FILL SHALL BE MOISTURE CONDITIONED TO WITHIN 2% OF OPTIMUM AND PLACED IN MAXIMUM 8" LOOSE LIFTS. COMPACT EACH LIFT TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTOR (D1557).
13. TEST COMPACTION AT APPROXIMATELY ONE TEST PER LIFT PER 500 SF.

GRADING, EROSION AND SEDIMENT CONTROL NOTES

EROSION AND SEDIMENT CONTROL:

1. THIS PROJECT MAY REQUIRE COVERAGE UNDER THE WASHINGTON STATE GENERAL NPDES PHASE II PERMIT FOR CONSTRUCTION PROJECTS. THE DEVELOPER SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT CONDITIONS. THE CITY HAS ADOPTED REVISED STANDARDS AFFECTING THE CONSTRUCTION OF NEW STORMWATER FACILITIES IN ORDER TO COMPLY WITH CONDITIONS OF ITS NPDES GENERAL MUNICIPAL STORMWATER PERMIT PROGRAM. THIS PROJECT, AND EACH PHASE THEREOF, SHALL ALSO COMPLY WITH THE REQUIREMENTS OF THE CITY'S STORMWATER PROGRAM IN PLACE AT THE TIME EACH PHASE IS ENGINEERED.
2. ALL CONSTRUCTION PROJECTS THAT DON'T MEET THE EXEMPTION REQUIREMENTS SHALL COMPLY WITH THE NPDES PERMIT. ALL CONSTRUCTION ACTIVITIES SUBJECT TO THIS TITLE SHALL COMPLY WITH THE STORMWATER MANAGEMENT MANUAL AND PREPARE A STORMWATER SITE PLAN.
3. ALL BEST MANAGEMENT PRACTICES USED FOR STORMWATER TREATMENT OF FLOW CONTROL SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON.
4. CONTRACTOR TO INSTALL ALL BEST MANAGEMENT PRACTICES (BMP'S) PRIOR TO BEGINNING SITE CONSTRUCTION.
5. ALL BMP'S ARE TO BE INSPECTED AND MAINTAINED DAILY DURING CONSTRUCTION.
6. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL.
7. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER COR STD DWG S16, SHEETS 1-3.
8. ALL VEHICLES LEAVING SITE ARE REQUIRED TO USE CONSTRUCTION ENTRANCES TO WASH WHEELS FOR MUD AND DUST CONTROL FROM LEAVING SITE.
9. EXISTING CATCH BASINS WITH POTENTIAL OF RECEIVING RUN-OFF FROM SITE CONSTRUCTION ARE TO BE PROTECTED WITH AN APPROVED BMP, PER COR STD DWG S16, SHEETS 1-3. LOCATIONS SHOWN ON PLAN.
10. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE COVERED WITH FILTER FABRIC TO PREVENT SEDIMENT ENTERING THE SYSTEM. THE FILTER FABRIC SHALL BE INSPECTED REGULARLY AND CLEANED WHEN NEEDED.
11. CONTRACTOR TO MINIMIZE DISTURBANCE FROM THEIR NATURAL STATE OF AREAS OUTSIDE STREETS, UTILITIES AND CONSTRUCTION STAGING AREAS.
12. CONSTRUCTION BYPRODUCTS (OILS, SOLVENTS, GLUES, ETC.) AND EXCESS MATERIALS (CONCRETE, ASPHALT, PAINT, ETC.) TO BE REMOVED FROM SITE AND DISPOSED OF PROPERLY.
13. CONTRACTOR TO INSTALL AND IMPLEMENT ADDITIONAL BMP'S AS SITE CONDITIONS OR FIELD CHANGES NECESSITATE. ALL CHANGES OR ADDITIONS TO THE EROSION CONTROL OR BMP'S ARE TO BE RELAYED AND COORDINATED THROUGH THE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL).
14. PROPERTIES ADJACENT TO THE PROJECT SITE THAT ARE SUBJECT TO POTENTIAL EROSION CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION THROUGH THE USE OF SILT FENCE OR OTHER BMP SELECTED BY THE CONTRACTOR.
15. THE CONTRACTOR AND/OR OWNER SHALL BE RESPONSIBLE AT ALL TIMES FOR PREVENTING SILT-LADEN RUNOFF FROM DISCHARGING FROM THE PROJECT SITE, FAILURE TO DO SO CAN RESULT IN A FINE.
16. ALL DISTURBED SOILS, INCLUDING STOCKPILES, EXPOSED AND/OR UNWORKED FOR MORE THAN THE TIME PERIODS DESCRIBED BELOW: 30 DAYS (JULY 1 THRU SEPT 30) 15 DAYS (OCTOBER 1 THRU JUNE 30) SHALL BE PROTECTED FROM EROSION.
19. INSTALL SILT FENCE WITH BACKUP SUPPORT PER COR STD DWG S16, SHEETS 1-3. SILT FENCE TO BE LAYFIELD WBSF-124 WIREBACKED CONTINUOUS ROLL.
20. WATER OR USE A SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
21. ALL DISTURBED AREAS SHALL BE STABILIZED WITH A MINIMUM OF 4" OF 1$\frac{1}{4}$" MINUS CRUSHED ROCK (CSBC) OR BE HYDROSEEDED. HYDROSEED SHALL BE APPLIED AT 60 LBS/ACRE WITH THE FOLLOWING SEEDING MIX: 40% ANNUAL RYEGRASS, 20% BLUE BUNCH WHEAT GRASS, 20% THICKSPIKE WHEAT GRASS, AND 20% SANDBERGS GRASS. ADDITIONALLY THE HYDROSEEDING SHALL INCLUDE 2,000 LBS/ACRE OF WOOD FIBER MULCH AND 50 LBS/ACRE OF GUAR BASED TACKIFIER.

KEY NOTES

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER COR STD DWG S16.
2. INSTALL 556 LF OF SILT FENCE PER COR STD DWG S16.
3. INSTALL 450 LF OF SILT FENCE PER COR STD DWG S16.
4. INSTALL INLET PROTECTION PER COR STD S16
5. 2' TERRACED LANDSCAPE RETAINING WALL. 205LF BY OTHERS.

CITY ENGINEER APPROVAL

SIGNATURE | DATE

NOTE: ALL UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS WITH UTILITY COMPANIES PRIOR TO TRENCHING.

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HARMS ENGINEERING, INC.
1632 W Sylvester Street, Pasco WA 99301 | 509.547.2679 | HarmsEngineering.com

Rev	Description	By	Date
1	REVIEW COMMENT REVISIONS	JCF	08-03-2020

Drawing Name
VERTISEE APARTMENTS
SITE GRADING PLAN & EROSION CONTROL PLAN
PARCELS 1-3099-200-0009-000 AND 1-3099-200-0010-000, COLUMBIA PARK TRAIL, RICHLAND, WA

Client/Project Information
WORLD BUILDER, LLC
LIONEL SINGLETON
PO BOX 3392, PASCO, WA 99302

Date: 03-11-2020
Project Number: 18-050.2
Sheet Number: C4

NOTES

CITY OF RICHLAND GENERAL NOTES (UPDATED JANUARY 8, 2016):

1. ALL CONSTRUCTION WORK AND MATERIALS ARE TO BE IN CONFORMANCE WITH CURRENT CITY OF RICHLAND (COR) STANDARD SPECIFICATIONS AND DETAILS AND 2016 EDITION OF WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (M41-10).
2. ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, UTILITY EASEMENT, OR INVOLVING THE CONSTRUCTION OF PUBLIC INFRASTRUCTURE WILL REQUIRE THE APPLICANT TO OBTAIN A RIGHT-OF-WAY PERMIT PRIOR TO CONSTRUCTION. A PLAN REVIEW AND INSPECTION FEE IN THE AMOUNT EQUAL TO 5% OF THE CONSTRUCTION COSTS OF THE WORK THAT WILL BE ACCEPTED AS PUBLIC INFRASTRUCTURE OR IS WITHIN THE RIGHT-OF-WAY OR EASEMENT WILL BE COLLECTED AT THE TIME THE PERMIT IS ISSUED. A STAMPED, ITEMIZED ENGINEERS ESTIMATE (OPINION OF PROBABLE COST) SHALL BE USED TO CALCULATE THE 5% FEE.
3. ONCE THE PLANS HAVE BEEN ACCEPTED BY THIS DEPARTMENT, A PRE-CONSTRUCTION CONFERENCE WILL BE REQUIRED PRIOR TO THE START OF ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENT. CONTACT THE CIVIL AND UTILITY ENGINEERING DIVISION AT 942-7500 OR 942-7742 TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE.
4. WHEN CONSTRUCTION OF THE INFRASTRUCTURE HAS BEEN SUBSTANTIALLY COMPLETED, THE APPLICANT SHALL PROVIDE 3 MIL MYLAR RECORD DRAWINGS TO THE CITY, AND ALSO AN ELECTRONIC COPY OF SAID RECORD DRAWINGS IN A FORMAT COMPLIANT WITH THE CITY'S CADD SOFTWARE. THE MYLAR RECORD DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER AND SHALL BE SUBMITTED AND APPROVED BY THE CITY BEFORE THE FINAL PUNCHLIST INSPECTION WILL BE PERFORMED. ALL FINAL PUNCHLIST ITEMS SHALL BE COMPLETED OR FINANCIALLY GUARANTEED PRIOR TO RECORDING OF THE FINAL PLAT. MYLAR RECORD DRAWINGS OF THE STREET LIGHTS ARE ALSO REQUIRED PRIOR TO THE FINAL INSPECTION.
5. NO WORK ON THIS PROJECT SHALL COMMENCE UNTIL A CITY OF RICHLAND RIGHT-OF-WAY CONSTRUCTION PERMIT HAS BEEN ISSUED.
6. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
7. THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE LICENSED BY THE STATE OF WASHINGTON AND BONDED TO DO WORK IN THE PUBLIC RIGHT-OF-WAY.
8. THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL HAVE A CURRENT CITY OF RICHLAND BUSINESS LICENSE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CONSTRUCTION DEFICIENCIES FOR A PERIOD OF ONE-YEAR FROM THE DATE OF ACCEPTANCE BY THE CITY OF RICHLAND.
10. THE CONTRACTOR SHALL BE REQUIRED TO CALL 1-800-424-5555 OR "811" A MINIMUM OF TWO WORKING DAYS PRIOR TO COMMENCING ANY EXCAVATION ACTIVITIES TO DETERMINE FIELD LOCATIONS OF ALL UNDERGROUND UTILITIES.
11. ANY CHANGES OR MODIFICATIONS TO THE PROJECT PLANS SHALL FIRST BE APPROVED BY THE CITY ENGINEER OR HIS REPRESENTATIVE.
12. THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED WITH THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
13. THE FACE OF CURB SHALL BE STAMPED AT ALL UTILITY CROSSINGS, MAIN LINES AND SERVICE LINES AS FOLLOWS: "S"-SANITARY SEWER, "I"-IRRIGATION, "G"-GAS, "W"-WATER, "C"-CONDUITS, "SD"-STORM DRAIN.
14. ALL FIRE HYDRANTS AND GUARD POSTS SHALL BE PAINTED OSHA SAFETY YELLOW, QUICKSET ENAMEL NO. 3472 HYDRANT YELLOW AS MANUFACTURED BY FARWEST PAINT MANUFACTURING COMPANY OR APPROVED EQUAL.
15. FIRE HYDRANTS AND STREET LIGHTS SHALL BE INSTALLED AT 2-FEET BEHIND THE BACK OF SIDEWALK TO THE FACE OF EQUIPMENT WHERE THE SIDEWALK IS ADJACENT TO THE CURB AND 6-FEET BEHIND THE BACK OF CURB WHERE THE SIDEWALK IS NOT ADJACENT TO THE CURB UNLESS OTHERWISE NOTED ON THE PLANS.
16. ANY DAMAGED OR BADLY DETERIORATED CONCRETE CURB, GUTTER AND SIDEWALK WITHIN PUBLIC RIGHT OF WAY SHALL BE REMOVED AND REPLACED. THIS INCLUDES ANY CURB DAMAGED BY CONSTRUCTION EQUIPMENT DURING THE PROJECT.
17. 2-INCHES OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED BENEATH ALL SIDEWALKS PRIOR TO PLACEMENT OF CONCRETE.
18. ALL STORM DRAINAGE MANHOLES SHALL BE CONSTRUCTED WITH A "SUMP" IN THE BOTTOM OF THEM, IN ACCORDANCE WITH THE STANDARD DETAILS.
19. IRRIGATION VALVE BOXES OR LIDS WITHIN THE ROADWAY OR PUBLIC RIGHT-OF-WAY NEED TO BE PER CITY OF RICHLAND SPEC: "RICH 931" CAST IRON LID SHALL HAVE "IRR" CAST INTO TOP.
20. A MINIMUM HORIZONTAL SEPARATION OF TEN-FEET SHALL BE MAINTAINED BETWEEN WATER MAINS AND SEWER MAINS AND SERVICE LINES. WATER MAINS SHOULD CROSS OVER THE TOP OF SEWER MAINS WITH A MINIMUM VERTICAL SEPARATION OF 18-INCHES. ANY CROSSING WITH A VERTICAL SEPARATION OF LESS THAN 18" OR ANY CROSSING IN WHICH THE WATER MAIN CROSSES BELOW THE SEWER MAIN SHALL BE IN ACCORDANCE WITH WASHINGTON STATE DEPARTMENT OF ECOLOGY STANDARDS. PRESSURIZED SEWER MAINS SHALL NOT CROSS OVER POTABLE WATER MAINS IN ANY CASE. IF A MINIMUM VERTICAL SEPARATION OF 12" CANNOT BE MAINTAINED BETWEEN MAINLINE PIPES, CDF OR CONCRETE SHALL BE USED AS BACKFILL IN PLACE OF NATIVE SOILS OR GRAVEL..
21. RESIDENTIAL SEWER SERVICES SHALL BE 4-INCHES IN DIAMETER AND SHALL EXTEND 10-FEET BEYOND THE RIGHT-OF-WAY INTO THE LOT. THE END SHALL BE MARKED WITH A MARKER POST INSTALLED IN ACCORDANCE WITH CITY STANDARD DETAILS.
22. RESIDENTIAL WATER SERVICES SHALL BE 1-INCH IN DIAMETER AND SHALL EXTEND 1-FOOT BEYOND THE BACK OF SIDEWALK THROUGH THE CURB STOP. THE END SHALL BE MARKED WITH A BLUE MARKER POST INSTALLED IN ACCORDANCE WITH CITY STANDARD DETAILS.
23. THE CONTRACTOR SHALL TAKE ANY NECESSARY MEANS TO KEEP FROM TRACKING MUD AND DEBRIS OUT ONTO THE EXISTING STREETS, AND SHALL ALSO KEEP MUD AND ANY OTHER DEBRIS FROM HIS SITE FROM ENTERING THE EXISTING PUBLIC STORM DRAINAGE SYSTEM.
24. THE CONTRACTOR SHALL SUPPLY A DUST CONTROL PLAN PRIOR TO STARTING WORK IN ACCORDANCE WITH RMC CHAPTER 9.16.046, SECTION J.
25. ALL DISTURBED AREAS SHALL BE HYDRO-SEEDED AT THE COMPLETION OF THE PROJECT.
26. THE CONTRACTOR SHALL TAKE CARE TO PREVENT CONSTRUCTION SITE RUNOFF FROM ENTERING INTO THE CITY'S STORMWATER SYSTEM, IN ACCORDANCE WITH RMC CHAPTER 16.05. CONSTRUCTION MATERIALS THAT MAY INTRODUCE SEDIMENT INTO THE STORMWATER SYSTEM MAY NOT BE STOCKPILED IN THE STREET. SUCH MATERIALS MAY INCLUDE BUT NOT BE LIMITED TO: CONSTRUCTION MATERIALS, SOIL, SAND, GRAVELS, ETC.

SANITARY SEWER / STORM DRAIN:

1. PIPE MATERIAL:
   - 1.1. 4"-15" PVC, ASTM D3034-SDR35 (FOR 4'-15' DEEP)
   - 1.2. 4"-15" PVC, ASTM D3034-SDR26 (FOR OVER 15' DEEP)
   - 1.3. 18"-48" PVC, ASTM F679-08-SDR26 (PS 115) (FOR ALL DEPTHS)
2. ALL PUBLIC STORM DRAINAGE SYSTEMS SHALL BE DESIGNED FOLLOWING THE CORE ELEMENTS DEFINED IN THE LATEST EDITION OF THE STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON. THE HYDROLOGIC ANALYSIS AND DESIGN SHALL BE COMPLETED BASED ON THE FOLLOWING CRITERIA: WASHINGTON, REGION 2, BENTON COUNTY; SCS TYPE 1A – 24 HOUR STORM FOR STORM VOLUME WITH A 25-YEAR RETURN PERIOD.
3. SANITARY SEWER MAINS TO HAVE A MINIMUM OF 48" COVER.
4. INSTALL SEWER SERVICE SADDLE CONNECTION TO NEW MAIN PER COR STD DWG S2.
5. INSTALL STANDARD SANITARY SEWER MANHOLE (PRECAST BASE) PER COR STD DWG S4.
6. INSTALL SHALLOW SANITARY SEWER MANHOLE (CAST IN PLACE BASE) PER COR STD DWG S5.
7. INSTALL SANITARY SEWER OUTSIDE DROP CONNECTION IN NEW MANHOLES PER COR STD DWG S6A.
8. INSTALL MANHOLE FRAMES AND COVERS LETTERED "SEWER", "STORM", OR "WATER" PER COR STD DWG S8.
9. INSTALL 6" OR 8" CLEANOUT ASSEMBLY PER COR STD DWG S9.
10. INSTALL SEWER MARKER POST PER COR STD DWG S10.
11. INSTALL TYPE 1 STORM DRAIN CATCH BASIN PER COR STD DWG S11.
12. INSTALL STORM DRAIN CATCH BASIN FRAMES AND COVERS PER COR STD DWG S12.
13. INSTALL STORM DRAIN CATCH BASIN MANHOLE PER COR STD DWG S13.
14. INSTALL SHALLOW STORM DRAIN CATCH BASIN MANHOLE PER COR STD DWG S14.
15. INSTALL EROSION CONTROL PLAN CONSTRUCTION BMP'S PER COR STD DWG S16, SHEETS 1-3.
16. INSTALL SPILL CONTROL SEPARATOR PER COR STD DWG S17.
17. INSTALL CURB OPENING INLET PER COR STD DWG S19.

WATER:

1. PIPE MATERIAL:
   - 1.1. ~~DUCTILE IRON, CL 50~~
   - 1.2. 4"-8" DI, CL 50
   - 1.3. ~~LARGER THAN 8", DUCTILE IRON, CL 50~~
   - 1.4. 2" PE SERVICE LINES (ASTM D3035, DR11, 200PSI, NSF61)
2. WATER MAINS TO HAVE A MINIMUM 48" COVER.
3. COORDINATE CONNECTION TO EXISTING WATER MAIN WITH COR CREWS.
4. INSTALL 1" STREET SERVICE PER COR STD DWG W1.
5. INSTALL WATER METER ASSEMBLY FOR 1" METERS PER COR STD DWG W3.
6. INSTALL WATER VALVE BOX PER COR STD DWG W9.
7. INSTALL CUT-IN TEE TO EXISTING WATER LINE PER COR STD DWG W10.
8. INSTALL TAP ON EXISTING WATER LINE PER COR STD DWG W11.
9. INSTALL TRACER WIRE ON NON-METALLIC WATER MAIN PER COR STD DWG W12.
10. INSTALL FIRE HYDRANT PER COR STD DWG W14.
11. INSTALL THRUST BLOCKING PER COR STD DWG W16.
12. INSTALL WATER SERVICE CONNECTION FOR NEW RESIDENTIAL LOT PER COR STD DWG W18.
13. INSTALL REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) DEVICES 2" AND SMALLER PER COR STD DWG W19.
14. A REGISTERED PROFESSIONAL ENGINEER OR A CONTRACTOR HOLDING A WASHINGTON STATE LEVEL III CERTIFICATE OF COMPETENCY SHALL DESIGN UNDERGROUND FIRE LINES.

MISC UTILITIES:

1. ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY FINAL LOCATIONS AND SIZES WITH UTILITY COMPANIES PRIOR TO TRENCHING.
2. SEE UTILITY PLAN TYPICAL SECTION PER COR STD DWG U1.
3. INSTALL MAIN LINES USING TRENCH DETAILS PER COR STD DWG U2.
4. SEE UTILITY ADJUSTMENTS PER COR STD DWG U4.

STREET, SIDEWALK, CURB/GUTTER, AND PARKING LOT:

1. HMA SHALL BE CLASS A PG 64-28, TOP COURSE SHALL BE ⅝" MINUS CRUSHED SURFACING (CSTC), AND BASE COURSE SHALL BE 1¼" MINUS CRUSHED SURFACING (CSBC), IN ACCORDANCE WITH SWSS DIVISION 4 AND SWSS DIVISION 9-03.9(3).
2. STREET STRUCTURAL FILL: COMPACT FILL MATERIAL TO 95% MAXIMUM DENSITY, BASED ON A STANDARD PROCTOR, ASTM D698, IN LIFTS NOT TO EXCEED 6".
3. APPLY SOIL RESIDUAL HERBICIDE WITHIN 24-HOURS PRIOR TO INSTALLING PAVING AND SIDEWALK MATERIAL PER WSDOT 5-04.3(5)D.
4. ASPHALT FOR TACK COAT SHALL BE REQUIRED AS SPECIFIED IN WSDOT 5-04.3(5)A AND SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT REPAIR AREAS.
5. INSTALL CURB, GUTTER AND SIDEWALK PER COR STD DWG ST1 AND ST7.
6. INSTALL STANDARD DRIVEWAY PER COR STD DWG ST2.
7. INSTALL LOCAL STREET RIGHT ANGLE INTERSECTION PER COR STD DWG ST16.
8. INSTALL TEMPORARY TURN AROUND PER COR STD DWG ST19.
9. INSTALL SURVEY MONUMENT PER COR STD DWG ST20.
10. INSTALL DETECTABLE WARNING SURFACE PER COR STD DWG ST21.

POWER (RICHLAND ENERGY SERVICES):

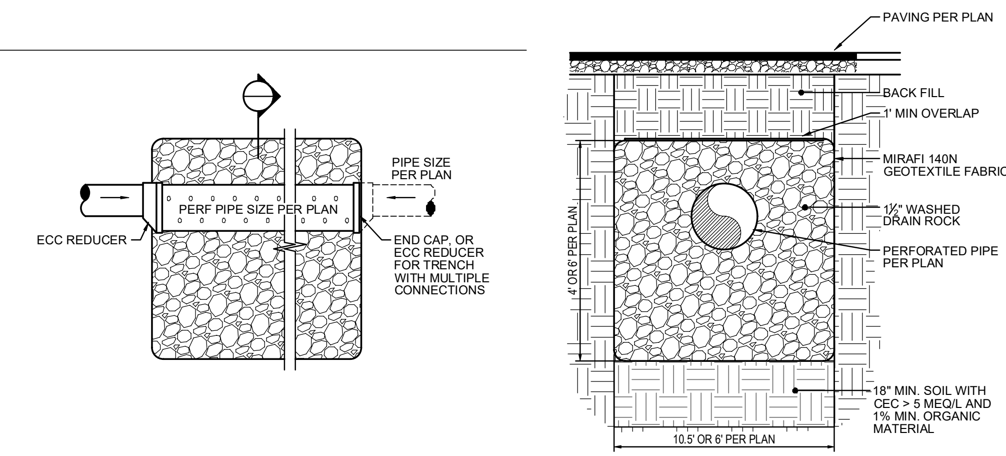
1. ALL UTILITY WORK TO BE DONE IN ACCORDANCE WITH CURRENT RICHLAND ENERGY SERVICES (RES) STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR WILL COMPACT ALL UTILITY TRENCHING OUTSIDE OF THE STREET R/W TO 85% OF THE MAXIMUM DENSITY.
3. THE CONTRACTOR WILL PROVIDE ALL TRENCH AND BACKFILL NECESSARY FOR INSTALLATION OF RICHLAND ENERGY SERVICES (RES) FACILITIES. THE CONTRACTOR WILL COMPLY WITH RES STANDARDS AND SPECIFICATIONS. TYPICAL TRENCH WILL BE 16" MIN. WIDTH AND 42" MIN. COVER (NOT TO EXCEED 48" DEPTH WITHOUT CONTACTING RES TO ASSURE COMPLIANCE WITH WAC 296-155-657). THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO RES FACILITIES (INCLUDES PHYSICAL DAMAGE, GRADE CHANGES, CLEARANCE REDUCTIONS AND FILL SETTLING) ON THIS SITE.
4. THE CONTRACTOR WILL PROVIDE ALL GRADES, PROPERTY CORNER LOCATIONS OR OTHER REFERENCE POINTS NECESSARY TO DETERMINE LOCATION AND DEPTH OF RES FACILITIES.
5. THE CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING ALL PERMITS NECESSARY AS SET FORTH UNDER WAC 332-120. FURTHERMORE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE IN COMPLIANCE WITH WAC 296-155-428, GENERAL REQUIREMENTS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ADHERE TO ALL OF THE REQUIREMENTS OF THIS CHAPTER.
6. IT IS THE DEVELOPER'S RESPONSIBILITY TO BE IN COMPLIANCE WITH WAC 296-46B-450, AS OUTLINED UNDER PARAGRAPH HEADING, EQUIPMENT FOR GENERAL USE TRANSFORMERS & TRANSFORMER VAULTS.
7. CONTACT RICHLAND ENERGY SERVICES FOR COORDINATION OF CONSTRUCTION AT (509) 942-7423 AND FOR WIRING DIAGRAMS, FINAL POWER CONDUIT AND STRUCTURE LOCATIONS.

CABLE, GAS, PHONE:

1. CONTACT FRANCHISE UTILITIES (CHARTER COMMUNICATIONS, CASCADE NATURAL GAS, AND FRONTIER COMMUNICATIONS) TO COORDINATE INSTALLATION IN JOINT TRENCH WITH POWER.
2. CONTRACTOR TO PROVIDE AND INSTALL 2" PVC CONDUITS FOR ALL PHONE CROSSINGS (MAIN LINE AND SERVICES).

LANDSCAPING:

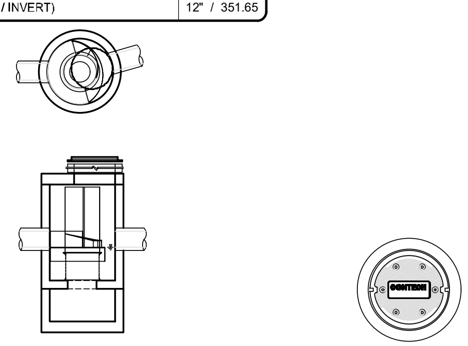
1. LANDSCAPING AND IRRIGATION SPRINKLER DESIGN BY OTHERS.



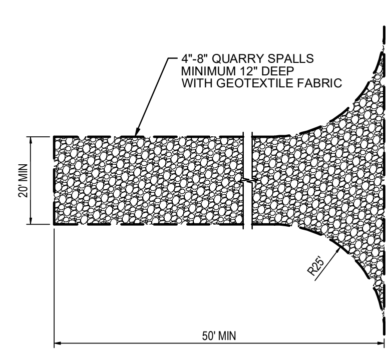
51/C3 **INFILTRATION TRENCH**
SCALE: NONE

CDS UNIT

STRUCTURE ID	CDS1
MODEL	CDS2015-4-C
WATER QUALITY FLOW RATE (CFS)	0.308
PEAK 100 YR FLOW RATE (CFS)	1.353
RETURN PERIOD OF PEAK FLOW RATES (YRS)	100
PIPE INLET (SIZE / INVERT)	10" / 351.85
PIPE OUTLET (SIZE / INVERT)	12" / 351.65



52/C3 **CONTINUOUS DEFLECTIVE SEPARATION (CDS) STRUCTURE**
SCALE: NONE



53/C4 **CONSTRUCTION EXIT PAD**
SCALE: NONE

CITY ENGINEER APPROVAL

SIGNATURE | DATE

NOTE: ALL UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS WITH UTILITY COMPANIES PRIOR TO TRENCHING.

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1632 W Sylvester Street, Pasco WA 99301 | 509.547.2679 | HarmsEngineering.com
Designed By: C BATAYOLA
Drawn By: J FROELICH
File Name: 18-050 Site 14
Plotted: Sep 1, 2020, 8:59:52 AM
File Path: P:\2018\18-050.1&2 World Builder Lionell Singleton Multi-Use Development\Dwgs

Rev	Description	By	Date
1	REVIEW COMMENT REVISIONS	JCF	08-03-2020

Drawing Name
VERTISEE APARTMENTS
NOTES AND DETAILS
PARCELS 1-3099-200-0009-000 AND 1-3099-200-0010-000, COLUMBIA PARK TRAIL, RICHLAND, WA

Client/Project Information
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PO BOX 3392, PASCO, WA 99302

CHRISTINE ENGAN BATAYOLA, STATE OF WASHINGTON, 42529, REGISTERED PROFESSIONAL ENGINEER, 3/11/2020

Date
03-11-2020
Project Number
18-050.2
Sheet Number
C5